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BY

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DECLARATION

I hereby declare that the present dissertation titled as **"A comparative study to assess the effectiveness of Povidone Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district",** is the outcome of the original research work undertaken and carried out by me under the guidance of **Prof. Mrs. J.M Jerlin Priya M.Sc(N), Ph.D, Principal cum professor** in the Department of Medical Surgical Nursing, and **Mrs. Savitha, M.Sc.,(N).**, in the Department of Obstetrics and Gynecological Nursing. I also declare that the material of this has not found in any way, the basis for the award of any degree or diploma in the university or any other university.

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ABSTRACT

EFFECTIVENESS OF POVIDONE IODINE SITZBATH VERSUS LAVENDER OIL SITZBATH ON EPISOTOMY PAIN AND WOUND HEALING AMONG POSTNATAL MOTHERS UNDERGONE NORMAL VAGINAL DELIVERY

INTRODUCTION

Post partum is a very special period for a women and her family. It is usually joyful when a pregnant mother gives birth to a baby whom she has expected. Episiotomy can be associated with extension or tear into the muscle of the rectum or even the rectum itself and may also lead to infection, bleeding, swelling, defects in wound closure, local pain and a short term possibility of sexual dysfunction.

Episiotomy is a common surgical procedure performed during second stage of labour to enlarge the vaginal introitus and facilitate delivery. Although episiotomy aids in safe delivery of the child, the discomfort of episiotomy is an added concern in the already over stressed situation of puerperium. Episiotomy pain and delayed wound healing often interferes with even basic daily activities of the postnatal mother.

In India, the overall rate of episiotomy was 40.6%. Among that midwives performed episiotomies at a lower rate of (21.4%) than faculty which is (33.3%) and private providers with (55.6%). The episiotomy rate in Tamilnadu is approximately 88% in women who are undergoing difficult labour.

Anupama conducted a study to assess the effectiveness of moist and dry heat application on healing of episiotomy wound among 30 postnatal mothers by using REEDA Scale. The subjects were randomly allocated to experimental and control group. The study concluded that rate of wound healing with of moist heat and dry heat application was similar.

The researcher during her experience with post natal mothers has found that most of the mothers who had undergone normal delivery with episiotomy wounds had complaints of pain, discomfort, infections delayed wound healing. The researcher feels that midwives have an important role in care of perineal wounds following child birth. This motivated the researcher to use Povidone Iodine sitzbath and Lavender Oil sitzbath for relieving episiotomy pain and promoting episiotomy wound healing.

STATEMENT OF THE PROBLEM

A comparative study to assess the effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district.

OBJECTIVES OF THE STUDY

- To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To assess the effectiveness by comparing the post interventional level of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

HYPOTHESES

H_1: There will be a significant difference between the pre and post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_2: There will be a significant difference between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_3: There will be a significant association between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

RESEARCH METHODOLOGY

The study was conducted in order to assess the effectiveness of Povidone Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healingamong postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari District. Level of episiotomy pain and wound healingwas assessed with the help of Jack Harich Verbal Descriptive Pain Assessment Scale and Davidson's REEDA Scaleand also the demographic and clinical variables of postnatal mothers were gathered from the participant's profile. After the conduction of pre-test, the data was analysed for presence of infection. Those who were free from infection were selected as study participants. They were 60 in number who met the inclusion criteria.30 postnatal mothers were allotted for Experimental group I and 30postnatal mothers were allotted for Experimental group II, by using the non-Probability Convenient sampling technique. The intervention of Povidone Iodine Sitzbath was given to Experimental group-I and Lavender Oil Sitzbathwas given to Experimental group II (each patients 5 days care). The patients cooperated well during data collection periods. On 5th day after intervention post-test was conducted using the same tool by the investigator.

DATA ANALYSIS

Un Paired t-test was used to assess the effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mother's undergone normal vaginal delivery in Experimental group I and II. Chi square test was used to find out the association between the post interventional level of episiotomy pain and wound healing among postnatal mothers with selected demographic and clinical variables in Experimental group I and II.

RESULT AND SUMMARY

The findings of the study shows that there was significant difference between the pre and post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery. By comparing the post interventional level of episiotomy pain and wound healing in Experimental group I and II, the mean value of episiotomy pain for Experimental Group I was 1.1 ±0.83. The mean value for Experimental group II was 1.766± 0.918. The un-paired t test value was (2.9210) which

was more than the table value of 2, degree of freedom was 58 and the P value was 0.005. The mean value of episiotomy wound healing for Experimental Group I was 3 ±2.66. The mean value for Experimental group II was 4.73± 3.28. The un-paired t test value was (4.73) which was more than the table and the P value was 0.02 which indicates statistically very significant. It was inferred that Lavender Oil Sitzbath was effective in reducing episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

CONCLUSION

The Researcher concludes that, Lavender Oil Sitzbath was effective in reducing episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery. The selected participants are comfortable and co-operated with the study. Overall the Researcher concluded that Lavender Oil Sitzbath was easy to apply and shows a better effect. The nurses can include the Lavender Oil Sitzbath in their routine activities to reduce the episiotomy related pain and wound healing.

CHAPTER I

INTRODUCTION

- ***Background of the study***
- ***Need for the study***
- ***Statement of the problem***
- ***Objectives of the study***
- ***Hypotheses***
- ***Operational definitions***
- ***Assumptions***
- ***Delimitations***
- ***Projected outcome***
- ***Conceptual framework***
- ***Summary***

CHAPTER II

REVIEW OF LITERATURE

- ***Reviews related to Episiotomy***
- ***Reviews related to selected pain reduction and wound care strategies on episiotomy pain and wound healing***
- ***Reviews related to effectiveness of Povidone Iodine Sitzbath on episiotomy pain and wound healing***
- ***Reviews related to effectiveness of Lavender Oil Sitzbath on episiotomy pain and wound healing***

CHAPTER III

RESEARCH METHODOLOGY

- *Research approach*
- *Research design*
- *Variables*
- *Settings*
- *Population*
- *Sample*
- *Sample size*
- *Sampling technique*
- *Sampling criteria*
- *Development of the tool*
- *Description of the tool*
- *Validity*
- *Reliability*
- *Pilot study*
- *Data collection procedure*
- *Plan for data analysis*
- *Ethical consideration*
- *Summary*

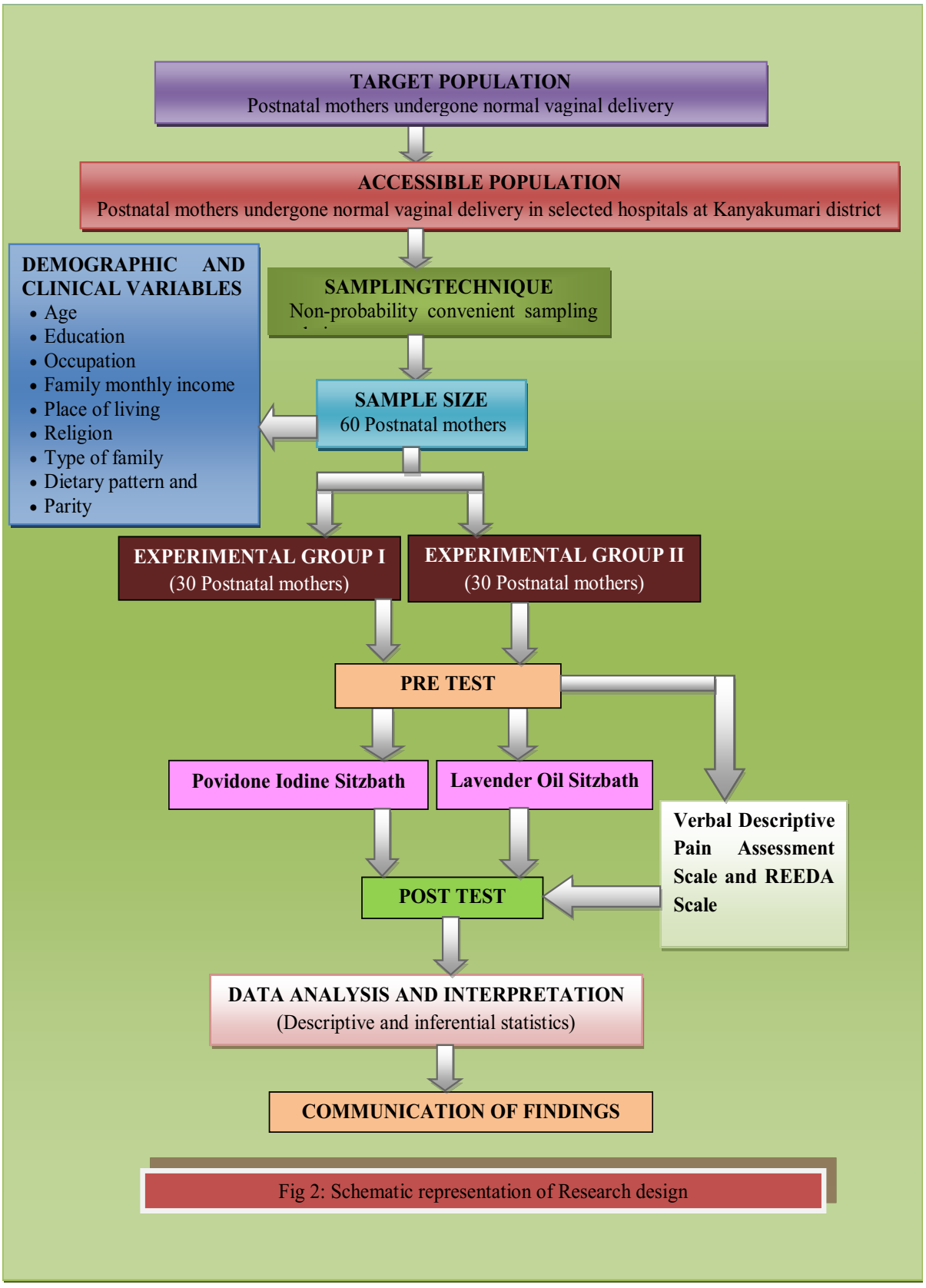

Fig 2: Schematic representation of Research design

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

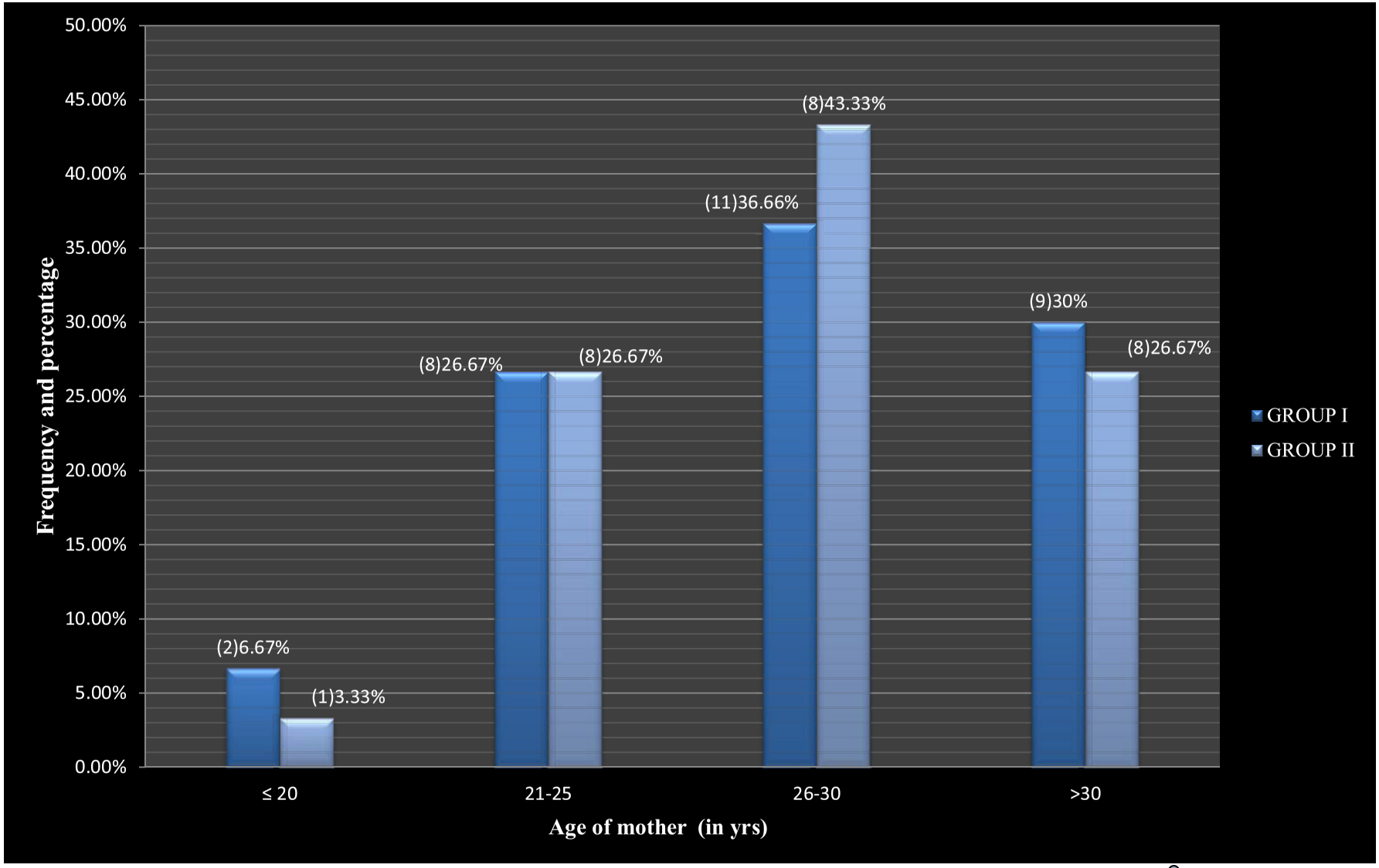

Fig 3: Frequency and Percentage distribution of postnatal mothers with regard to the Age

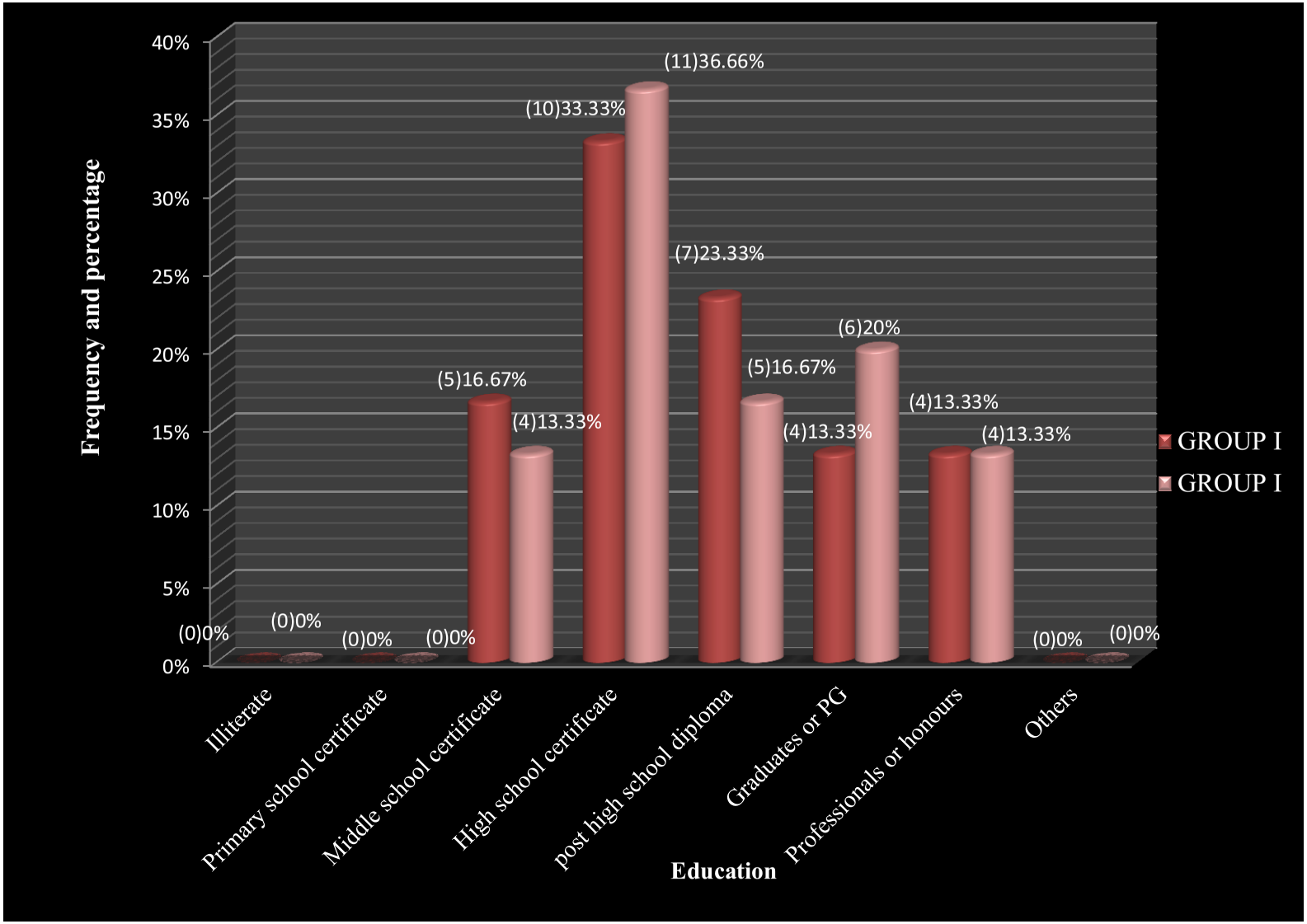

Fig 4: Frequency and Percentage distribution of postnatal mothers with regard to the Education

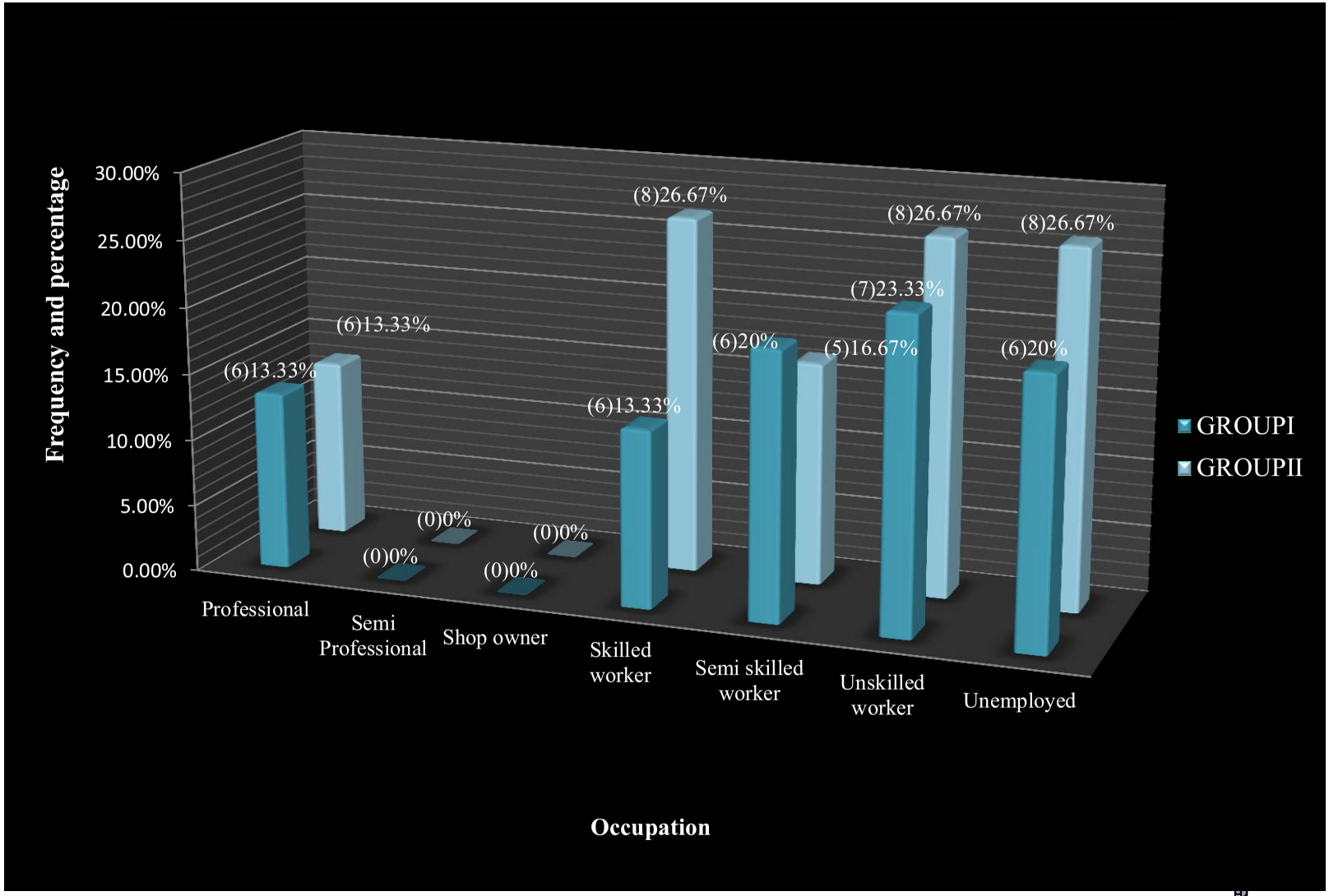

Fig 5: frequency and Percentage distribution of postnatal mothers with regard to the Occupation

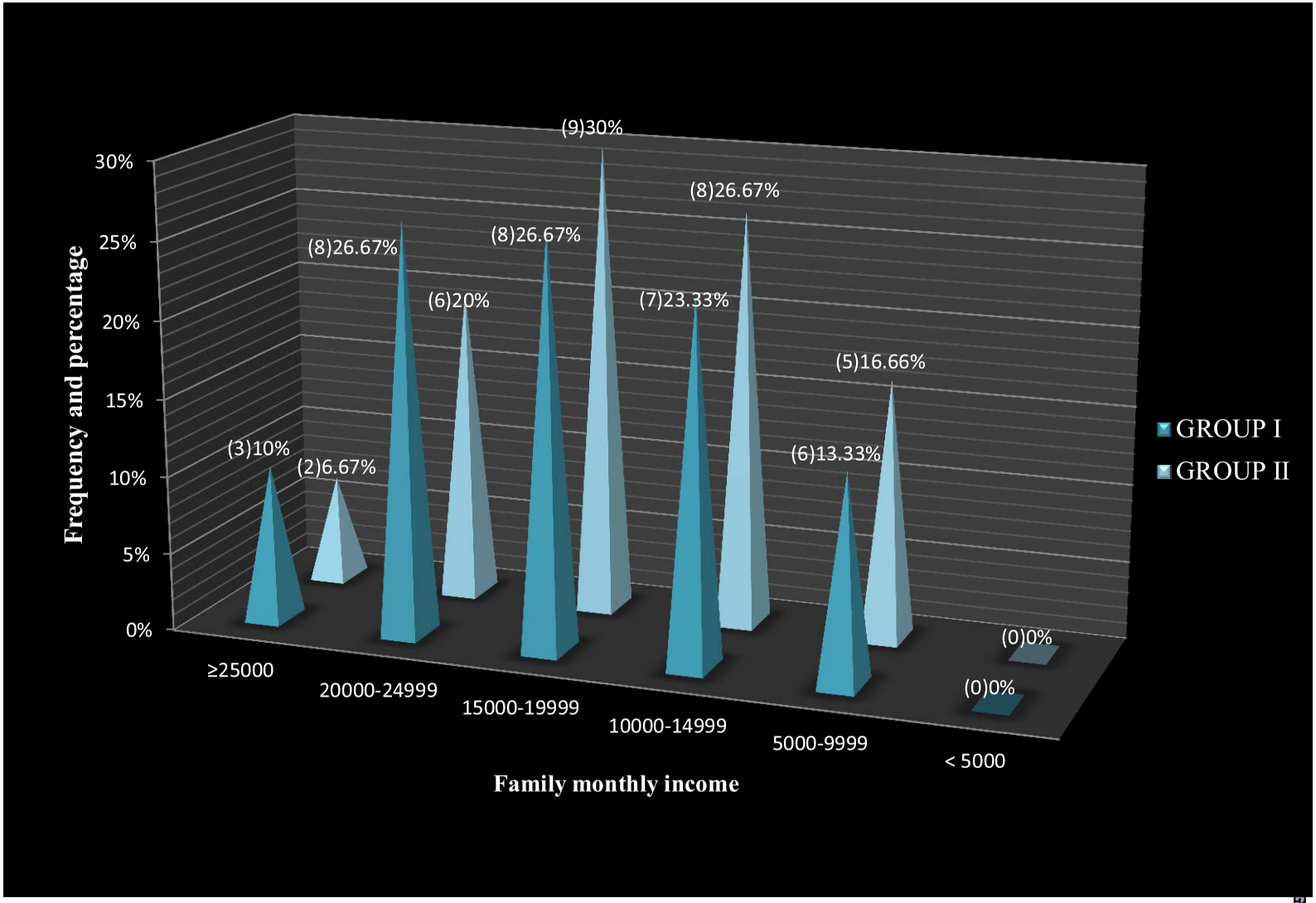

Fig 6: Frequency and Percentage distribution of postnatal mothers with regard to the Family monthly income

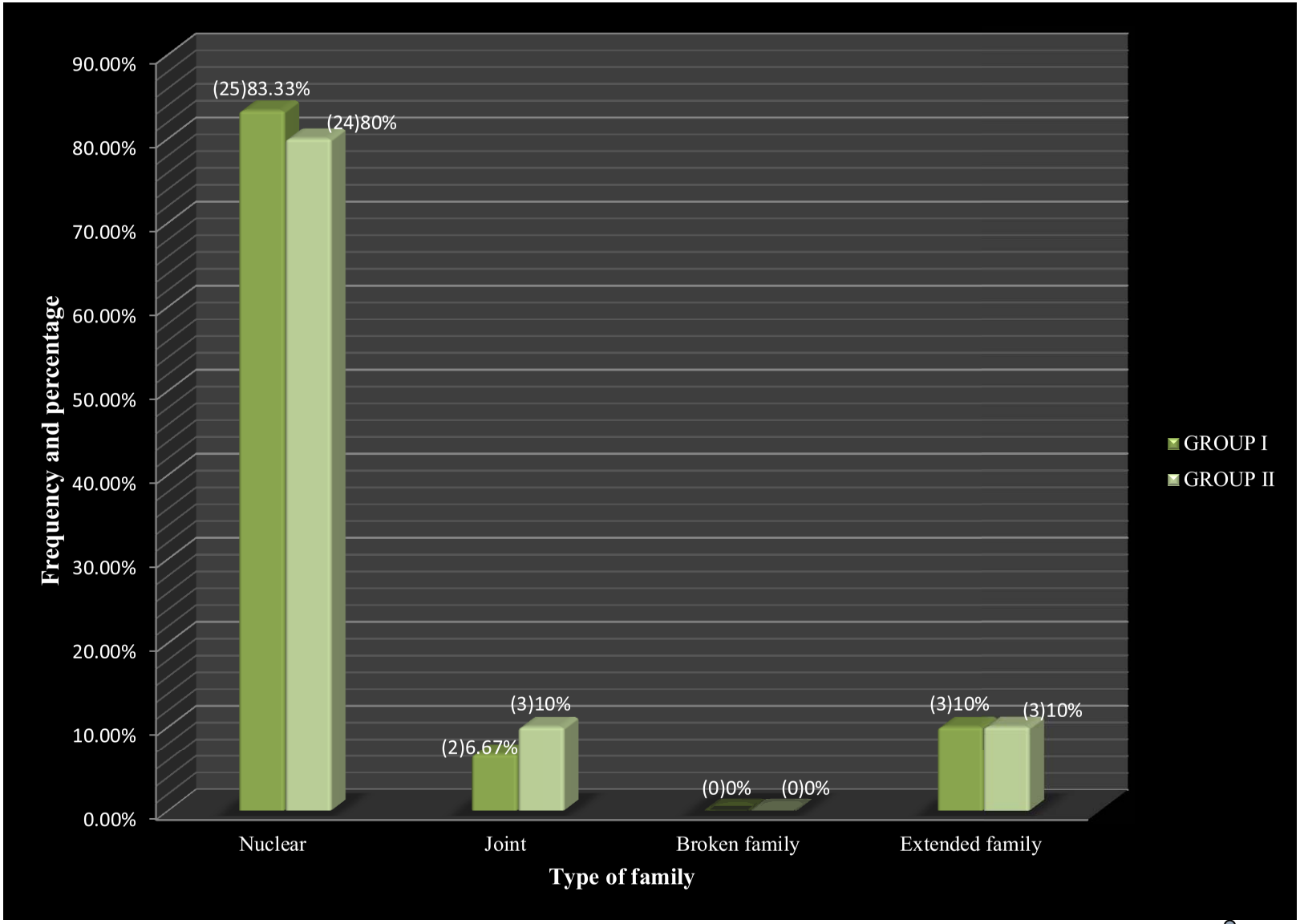

Fig 7: Frequency and Percentage distribution of postnatal mothers with regard to the Type offamily

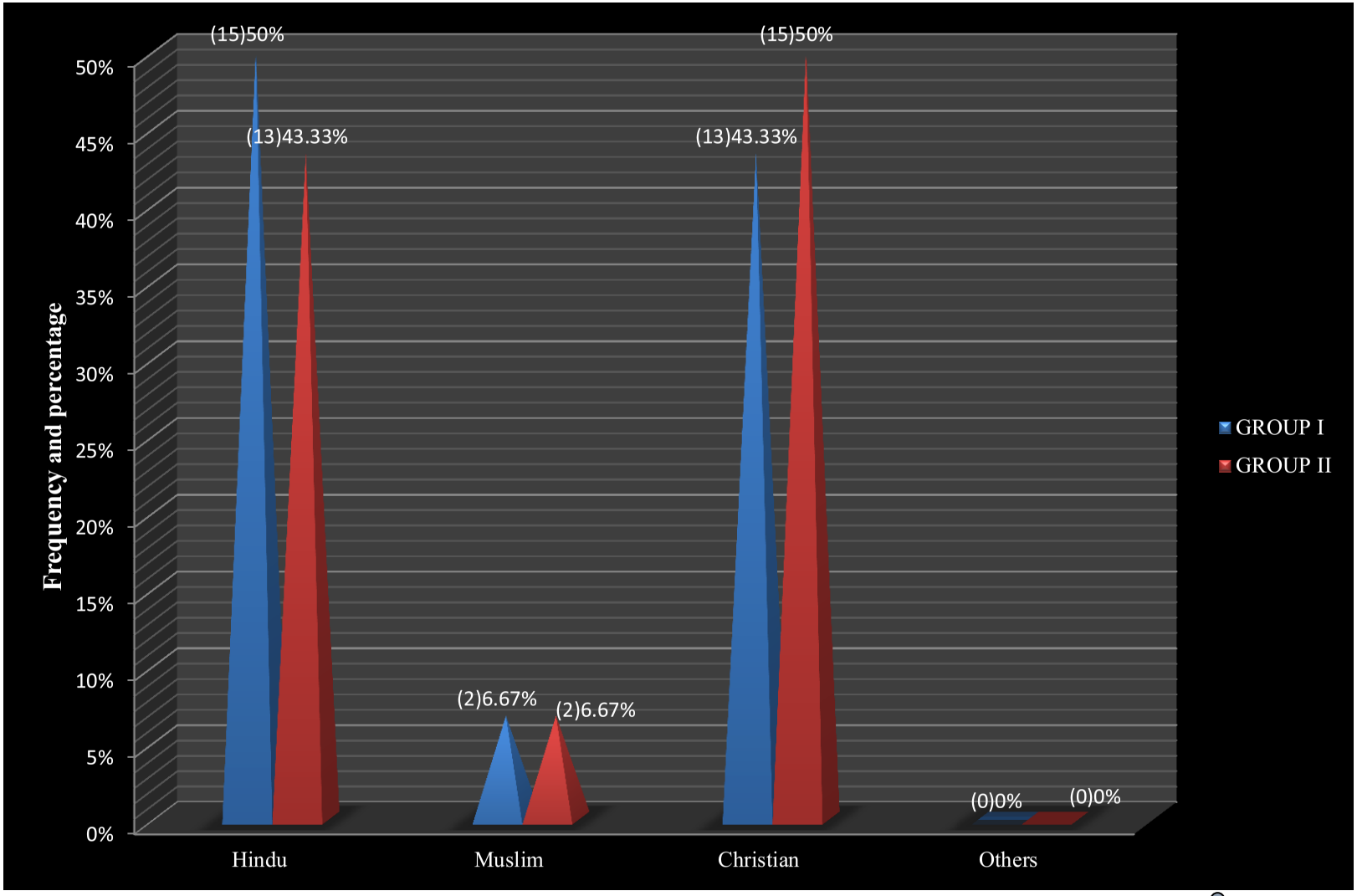

Fig 8: Frequency and Percentage distribution of postnatal mothers with regard to the Religion

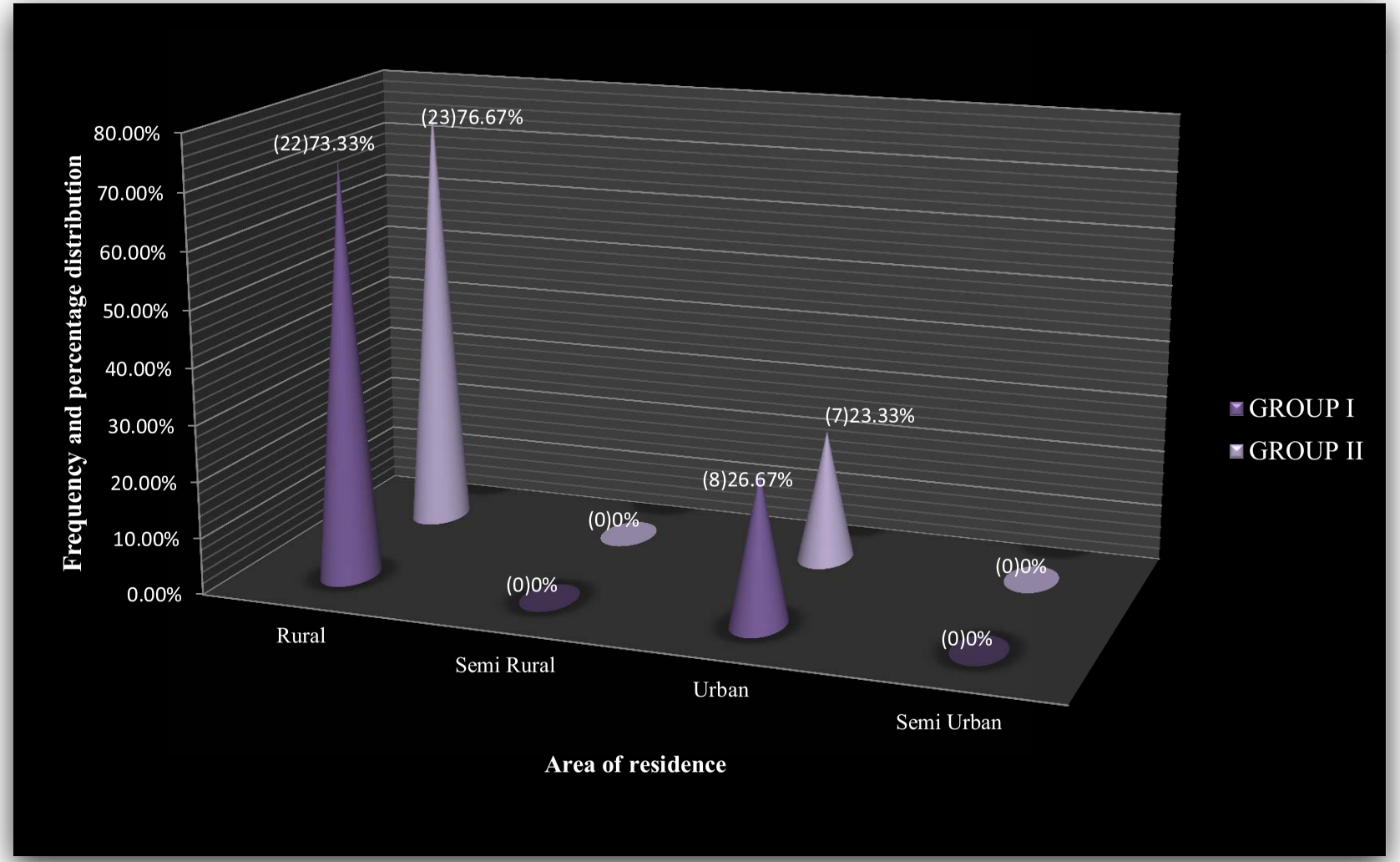

Fig 9: Frequency and Percentage distribution of postnatal mothers with regard to the Area of residence

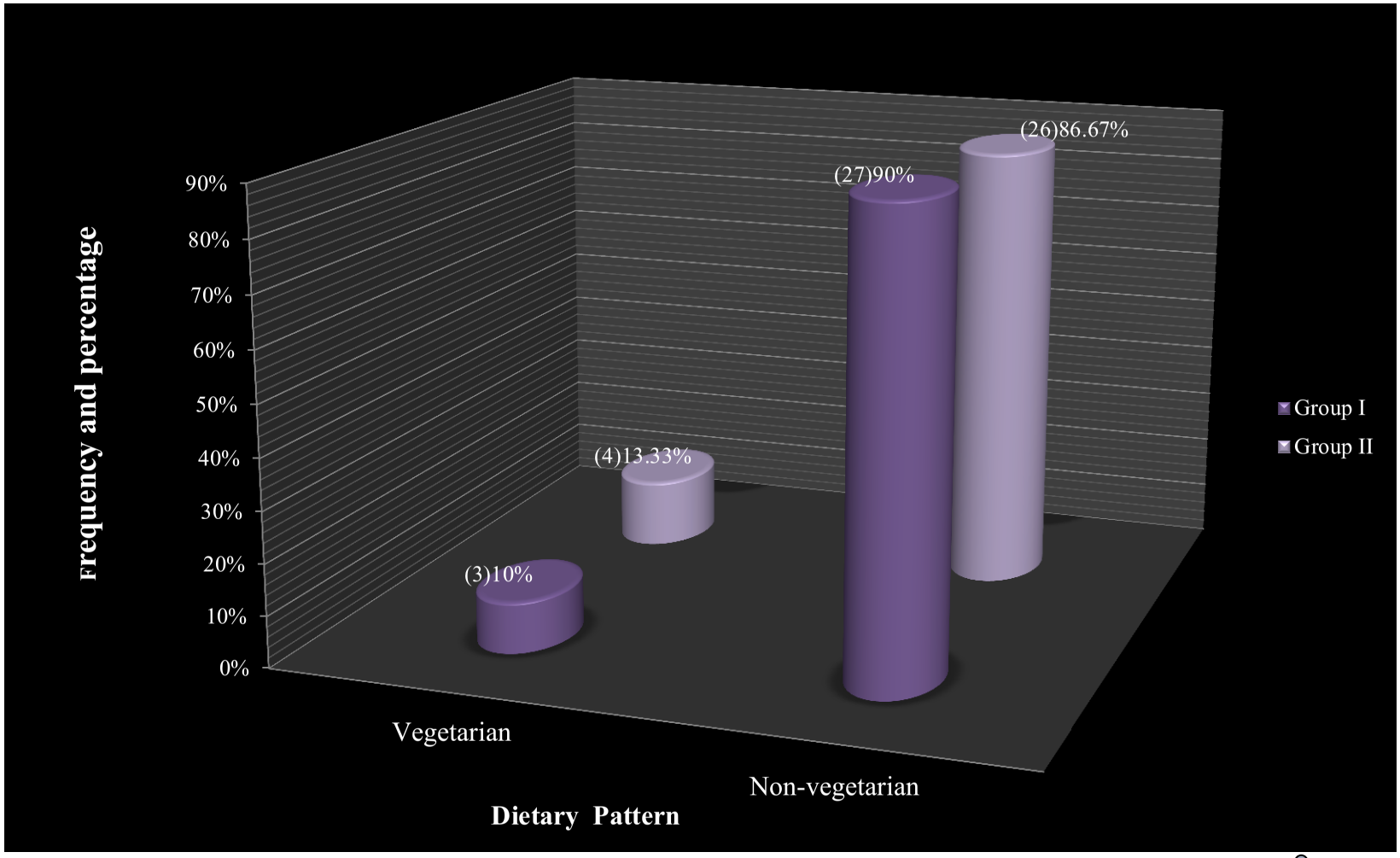

Fig 10: Frequency and Percentage distribution of postnatal mothers with regard to the Dietary pattern

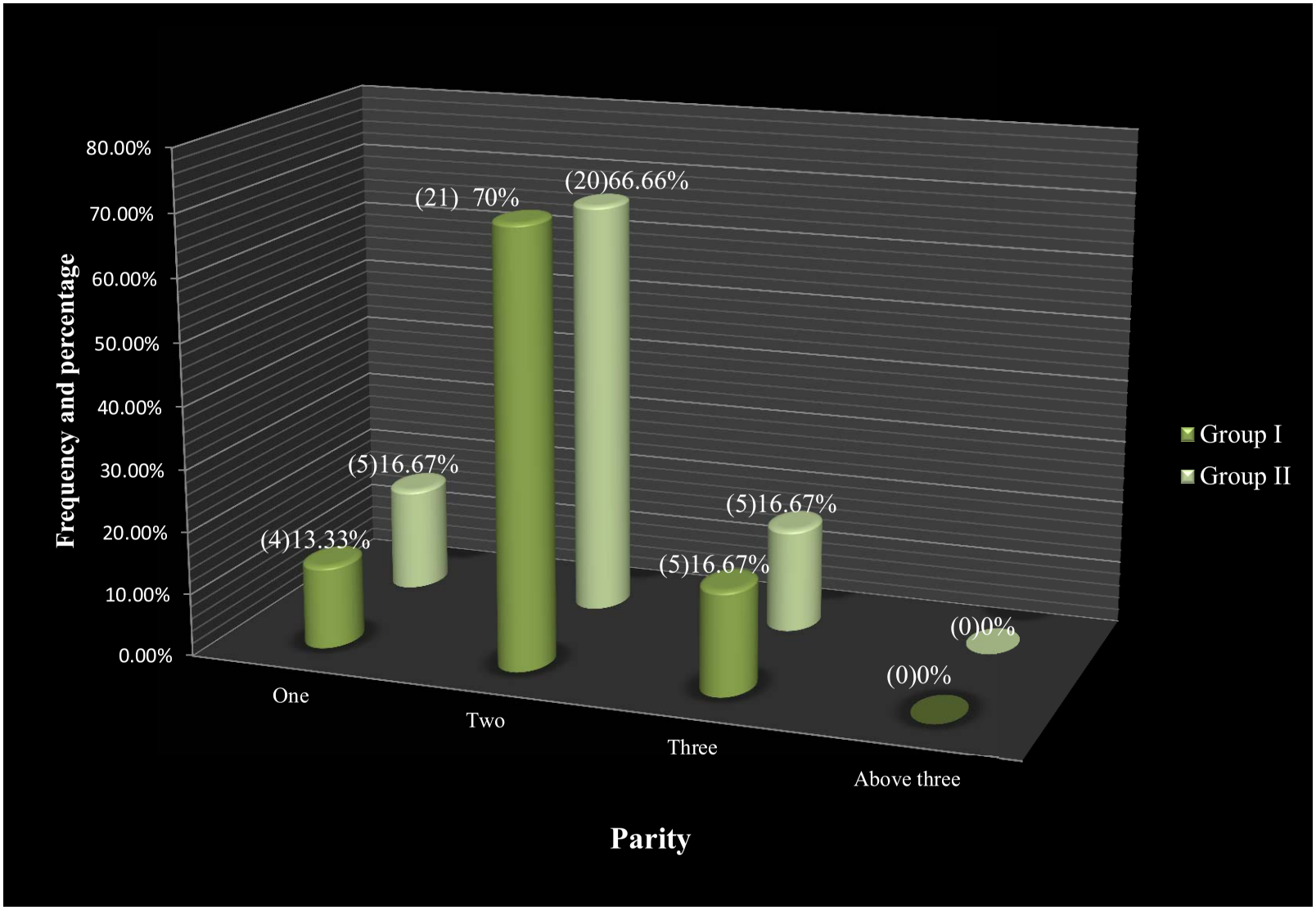

Fig 11: Frequency and Percentage distribution of postnatal mothers with regard to the Parity

CHAPTER V

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CHAPTER VI

SUMMARY

CONCLUSION

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Postnatal.[online].Available from:

URL:http://www.en.wikepedia.org/wiki/postnatal.

XU

ANNEXURE I

LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

Annammal College of Nursing

(Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council, Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University)

Annammal Hospital Campus, KUZHITHURAI - 629 163

K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605

www.annammalnursing college.com Email : annammalcollege2007@yahoo.co.in

Dr. Sheeba Jayalal MBBS, DGO
Chairperson

Date : .....

From

Prof.Mrs.J.M.Jerlin Priya, M.Sc(N).,Ph.D.,
Principal,
Annammal College of Nursing,
Kuzhithurai.

To

Our Motto : "Heal us to Heal others"

Respected Sir,

Sub: Seeking permission to conduct the research study.

Ms.Ragania.D, II year M.Sc (N) student of Annammal College of Nursing, Kuzhithurai, is approaching you to conduct a research on "A comparative study to assess the effectiveness of Povidone-iodine Sitzbath versus Lavender oil Sitzbath on Episotomy pain and wound healing among Postnatal mothers in selected Hospitals at Kanyakumari District". Which she has to complete as a partial fulfillment of university requirement for the award of Master of Science in Nursing Degree.

In this regards I humbly request you to give permission to conduct the study in your hospital.

Thanking you

Yours faithfully,

Principal

Principal
Annammal College of Nursing
Kuzhithurai, K.K. Dist... 629 163

"What we are is gift of god and What we become is gift to god"

ANNEXURE II

LETTER GRANDING PERMISSION TO CONDUCT THE STUDY

Dr. M. Santhi M.D.,D.G.O.,D.R.M.,(Germany)
Director, Infertility Specialist
Obstetrician & Gynecologist.

Rathna Fertility Centre

DATE : 11/02/2016

TO

The Principal
Annammal College of Nursing
Kuzhithurai

Sub: Granding Permission to conduct the Research Study – Reg

We would like to inform you that we are glad to permit for the research on " A comparative study to assess the effectiveness of Povidone - Iodine sitzbath versus Lavender Oil Sitzbath on Episiotomy pain and wound healing among postnatal mothers undergone Normal vaginal Delivery in selected hospitals at Kanyakumari district" for Miss. Ragania . D of II year M.Sc (N) student for the month of December 2015.

Dr. M. SANTHI
M.D.,DGO.,DRM.,(GERMANY)
Reg. No : 56898

RATHNA MEMORIAL HOSPITAL
11/208, Main Road, Swamiyarmadam, Kattathurai Post, Kanyakumari District, TamilNadu -629 158.
Ph: 04651 - 275120, mahilansanthi@gmail.com, www.rathnahospital.com

ANNEXURE II

LETTER GRANDING PERMISSION TO CONDUCT THE STUDY

33 Years of Excellence

PPK HOSPITAL
Main Road. Marthandam - 629 165
Ph:04651-270135, 273245, 273255
E-mail : ppkvijayakumar@gmail.com

31.01.2016

To,

The Principal,
Annammal College of Nursing,
Kuzhithurai.

Sub : Granting permission to conduct the research study – reg.

We would like to inform you that we are glad to permit a research on "A comparative study to assess the effectiveness of Povidone Iodine Sitzbath Versus Lavender Oil Sitzbath on Episiotomy Pain and Wound Healing among Postnatal Mothers in Selected Hospital at Kanyakumari District for Ms. Ragania .D , II Year M.Sc (N) student for the month of December – 2015.

P.P.K. HOSPITAL MARTHANDAM PIN - 629 165

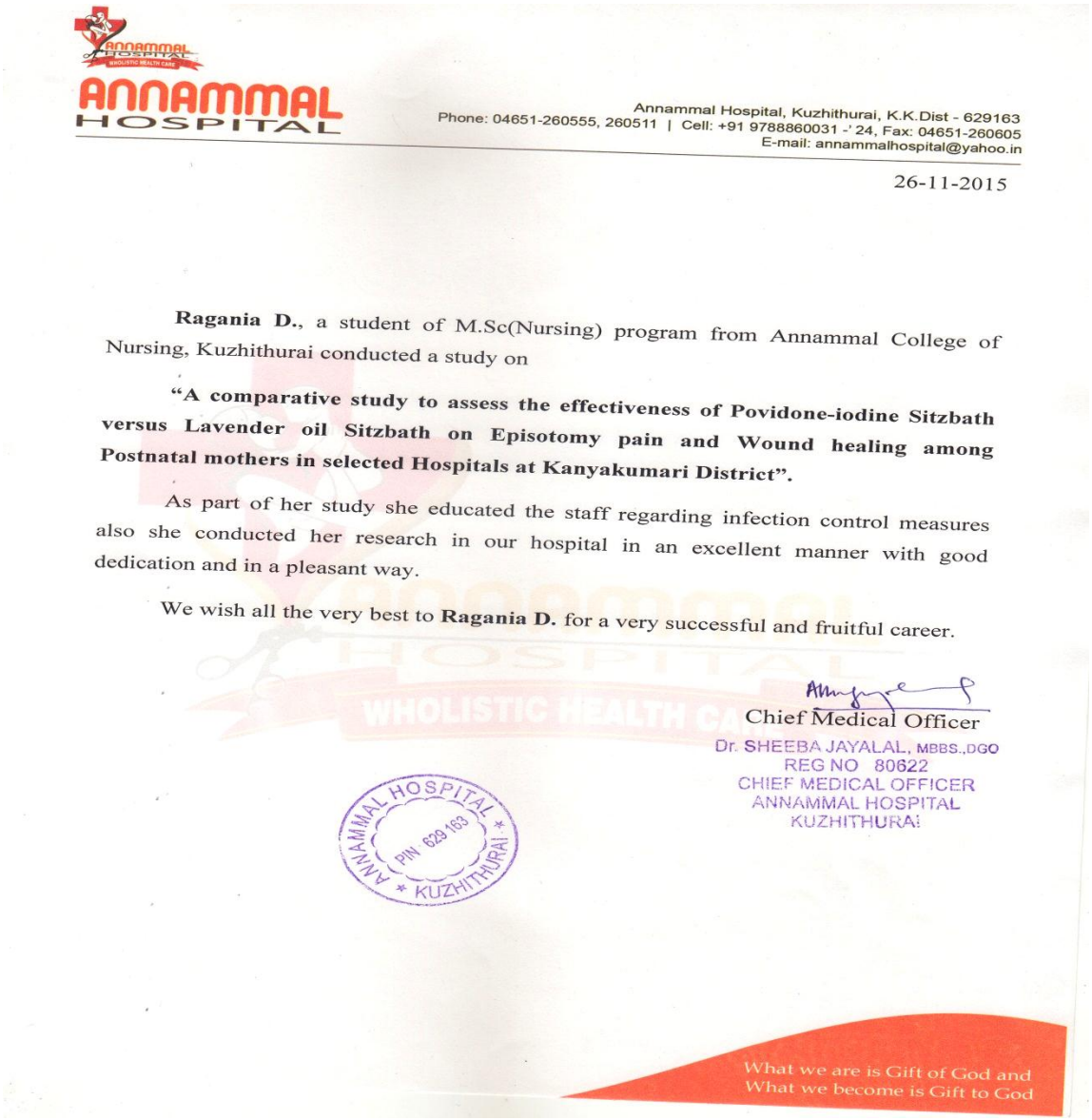
Administrative Officer,

A. MATHIVANAN MBA
ADMINISTRATOR OFFICER
PPK HOSPITAL
MARTHANDAM-629 165

QUALITY HEALTH CARE WITHIN YOUR REACH

ANNEXURE II

LETTER GRANDING PERMISSION TO CONDUCT THE STUDY



ANNAMMAL HOSPITAL

Annammal Hospital, Kuzhithurai, K.K.Dist - 629163
Phone: 04651-260555, 260511 | Cell: +91 9788860031 -' 24, Fax: 04651-260605
E-mail: annammalhospital@yahoo.in

26-11-2015

Ragania D., a student of M.Sc(Nursing) program from Annammal College of Nursing, Kuzhithurai conducted a study on

"A comparative study to assess the effectiveness of Povidone-iodine Sitzbath versus Lavender oil Sitzbath on Episotomy pain and Wound healing among Postnatal mothers in selected Hospitals at Kanyakumari District".

As part of her study she educated the staff regarding infection control measures also she conducted her research in our hospital in an excellent manner with good dedication and in a pleasant way.

We wish all the very best to **Ragania D.** for a very successful and fruitful career.

Chief Medical Officer
Dr. SHEEBA JAYALAL, MBBS.,DGO
REG NO 80622
CHIEF MEDICAL OFFICER
ANNAMMAL HOSPITAL
KUZHITHURAI

ANNAMMAL HOSPITAL PIN 629 163 KUZHITHURAI

What we are is Gift of God and
What we become is Gift to God

ANNEXURE III

ETHICAL CLEARANCE CERTIFICATE

Valid from : 2015

Valid to : 2016

Name of the Investigator: Miss. Ragania.D

The Ethical committee meeting held on 07-03-2015 had reviewed the project titled "A comparative study to assess the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district". The proposal was submitted before the ethical committee for the acceptance and found to be acceptable on ethical grounds. The ethical committee held responsibility and accountability for the investigator for any other administrative approvals that may pertain to this research. This has to be carried out according to conditions outlined in the original protocol submitted for ethical review.

This certificate of approval is valid for the time period provided, there is no change in the methodology protocol or consent process and documents.

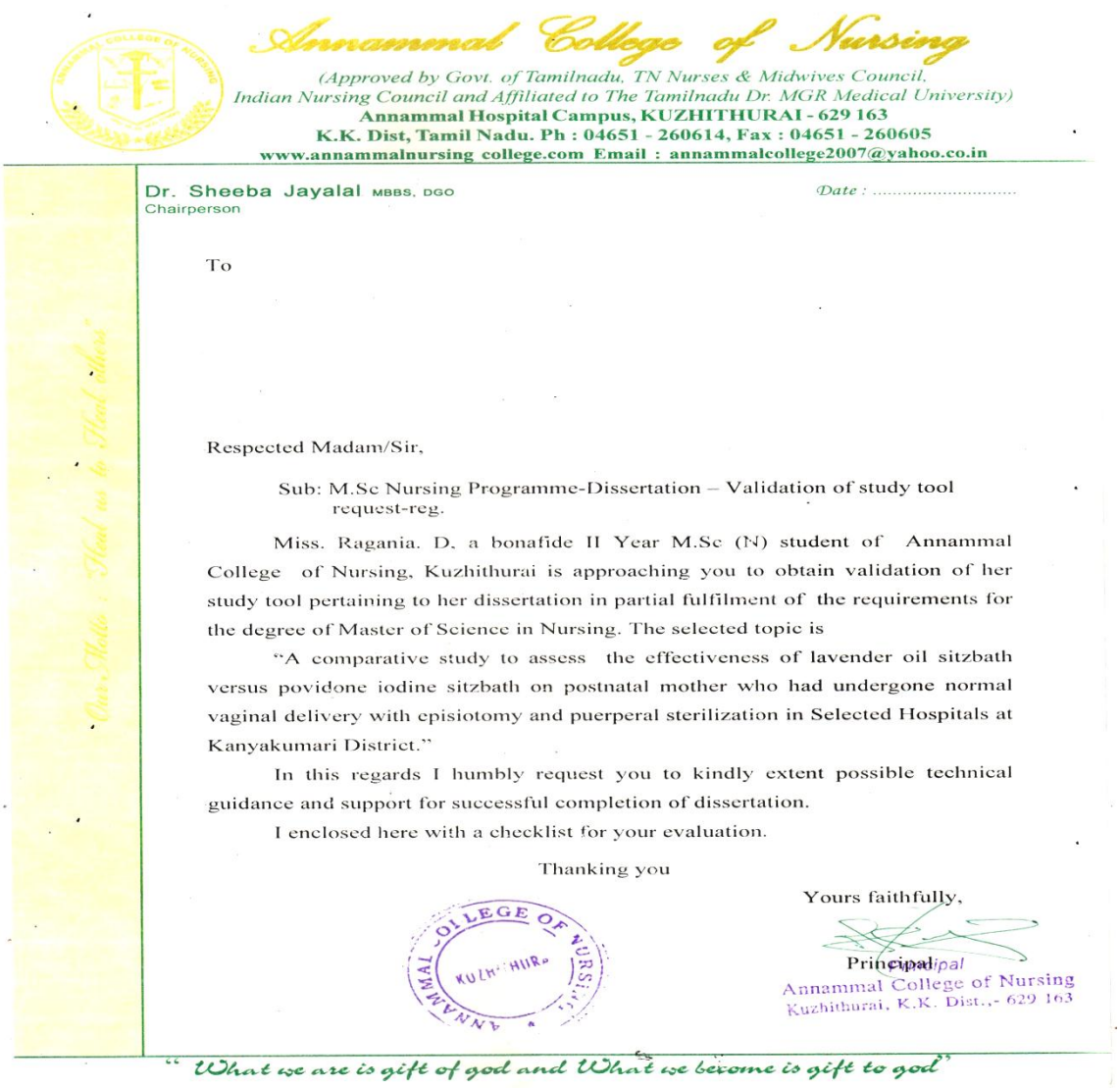
Any significant change should be reported to guide for its considerations in advance for its implementation.

Signature of Ethical Committee members:

1. **Dr. Sheeba Jayalal M.B.B.S.,D.G.O.,**
   Chief Medical Officer
2. **Dr. Jayalal M.S.,F.I.C.S.,(Germany),M.B.A.,F.I.A.G.E.S**
   Chief Surgeon
3. **Dr. Shanthi Appavu M.Sc(N).,PhD**
   Nursing Research Advisor
4. **Prof. Mrs. JerlinpriyaM.Sc (N).,PhD**
   Research Guide

ANNEXURE IV

LETTER SEEKING EXPERTS OPINION FOR THE VALIDITY OF THE TOOL



Annammal College of Nursing

(Approved by Govt. of Tamilnadu, TN Nurses & Midwives Council, Indian Nursing Council and Affiliated to The Tamilnadu Dr. MGR Medical University)

Annammal Hospital Campus, KUZHITHURAI - 629 163

K.K. Dist, Tamil Nadu. Ph : 04651 - 260614, Fax : 04651 - 260605

www.annammalnursing college.com Email : annammalcollege2007@yahoo.co.in

Dr. Sheeba Jayalal MBBS, DGO
Chairperson

Date : .....

To

Respected Madam/Sir,

Sub: M.Sc Nursing Programme-Dissertation – Validation of study tool request-reg.

Miss. Ragania. D, a bonafide II Year M.Sc (N) student of Annammal College of Nursing, Kuzhithurai is approaching you to obtain validation of her study tool pertaining to her dissertation in partial fulfilment of the requirements for the degree of Master of Science in Nursing. The selected topic is

"A comparative study to assess the effectiveness of lavender oil sitzbath versus povidone iodine sitzbath on postnatal mother who had undergone normal vaginal delivery with episiotomy and puerperal sterilization in Selected Hospitals at Kanyakumari District."

In this regards I humbly request you to kindly extent possible technical guidance and support for successful completion of dissertation.

I enclosed here with a checklist for your evaluation.

Thanking you

Yours faithfully,

Principal
Annammal College of Nursing
Kuzhithurai, K.K. Dist.,- 629 163

"What we are is gift of god and What we become is gift to god"

ANNEXURE V

VALIDATION FOR RESEARCH TOOL
EVALUATION CRITERIA CHECKLIST FOR VALIDATING TOOL

Instructions:

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly place tick mark in the appropriate column and give remarks.

Interpretation of column:

Column I : Meets the criteria.

Column II : Partially meets the criteria.

Column III: Does not meets the criteria.

SL NO	CRITERIA	1	2	3	REMARKS
1	Content ➢ Adequacy ➢ Relevance ➢ Organized				
2	Language ➢ Simplicity ➢ Clarity ➢ Relevant				
3	Scoring ➢ Easy to score ➢ Clarity ➢ Relevant				
4	Practicability ➢ Procedure ➢ Utility ➢ Feasibility				

Signature :

Name : Any other suggestions :

Designation :

Address :

ANNEXURE VI

LIST OF EXPERTS.

1. **Dr. Sheeba Jayalal, MBBS., DGO.,**
   Chief Medical Officer,
   Department of Obstetrics and Gynecology,
   Annammal Multi-Specialty Hospital,
   Kuzhithurai, K.K District,Tamil Nadu.

2. **Mrs. Joylet Paulian M.Sc(N).,**
   Reader, Department of Obstetrics and Gynecology,
   C.S.I College of Nursing,
   Marthandam.

3. **Mrs. Asha Packialet M.Sc(N).,**
   Asso.professor,
   White Memorial College of Nursing,
   Attoor.

4. **Mrs.S. Anita Mary Leena M.Sc(N).,**
   Professor, Department of Obstetrics and Gynecology,
   St. Xavier's Catholic College of Nursing,
   Chunkankadai.

5. **Mrs. Jeba Nesa Mahiba M.Sc(N).,**
   Asst.professor, Department of Obstetrics and Gynecology,
   Christian College of Nursing,
   Neyyoor.

6. **Mrs.T.Jameela M.Sc(N).,**
Reader, Department of Obstetrics and Gynecology,
Global College of Nursing,
Marthandam.

7. **Mrs. Felecia Jane Disuali M.Sc(N).,**
Asst.professor, Department of Obstetrics and Gynecology,
Thasiah College of Nursing,
Marthandam.

8. **Mrs.S.Sheeja M.Sc(N).,**
Reader, Department of Obstetrics and Gynecology,
Grace College of Nursing,
Padanthalumoodu

9. **Mrs.Arzta Sophia**
Reader, Department of Obstetrics and Gynecology,
Christian College of Nursing,
Neyyoor.

10. **Mr. Anto John Britto M.Sc., M.Ed., M.Phill., P.G., BBM.,**
Bio Statistican,
Scott Christian College,
Nagercoil.

ANNEXURE VII

RESEARCH PARTICIPANT CONSENT FORM

Dear participant,

I am Ragania.D II year M.Sc Nursing student of Annammal College of Nursing, Kuzhithurai. As a part of my study, a research on 'Effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery'. The findings of the study will be helpful in reducing the pain and wound healing in postnatal mothers. I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be maintained.

Signature of the researcher

I ……. hereby consent to participate and undergo the study.

Place:

Date:

Signature of the participant

Muha;r;rp xg;g[jy; gotk;

md;ghh]e;;j; g';FbgWnthnu/

bufd;ah. j Mfpa ehd; md;dk;khs; brtpypah; fy;Y}hpapy; brtpypah; KJfiyg]gl]lk] ,uz;lhk; Mz;L goj;J tUfpnwd.; vdJ gog;gpd; xUgFjpahf/ gpurtj;jp;d; nghJ jha;khh;fSf;F gpwg;g[Wg;g[gFjpapy; Vw;;g;gLj;jg]gLk] fPwypdhy] cz;lhFk; g[z;zpida[k]/ nkYk] mjd; typapida[k] vspjpy; Fzg]gLj;JtJ gw;wpa Muha;r;rp bra;fpnwd;. ,jw;F j';fSila mDkjpiaa[k;/ xj;JiHg;iga[k; juntz;Lfpnwd;. jat[bra;J c';fSila gjpy;fs; cz;ikahft[k; btspg;gilahft[k; ,Uf;f ntz;Lfpnwd;. c';fs; gjpy;fs; midj;Jk; ufrpakhf ghJfhff;fg;gLk; vd cWjp mspf;fpnwd;.

Muha;r;rpahshpd;
ifbahg;gk;

ehd; …… ,e;j Muha;r;rpapy; g';Fbgw rk;kjpf;fpnwd;.

,lk;:

ehs;: g';FbgWnthhpd; ifbahg;gk]

ANNEXURE VIII

CERTIFICATE OF ENGLISH EDITING

TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation, " A comparative study to assess the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers in selected hospitals at Kanyakumari district" by Miss. Ragania. D, 2nd year MSc(N) student of Annammal College of Nursing was edited for English language appropriateness by .....

GOVT. GIRLS MIDDLE SCHOOL
Date: .....
KUZHITHURAI - 629163

Signature 29/1/16
HEADMASTER
GIRLS MIDDLE SCHOOL
KUZHITHURAI

ANNEXURE IX

CERTIFICATE OF TAMIL EDITING

TO WHOMEVER IT MAY CONCERN

This is to certify that the dissertation, " A comparative study to assess the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers in selected hospitals at Kanyakumari district" by Miss. Ragania. D, 2nd year MSc(N) student of Annammal College of Nursing was edited for Tamil language appropriateness by ...Thankamani.....

GOVT. GIRLS MIDDLE SCHOOL
Date: .....
KUZHITHURAI - 629163

Signature 29/1/16
HEADMASTER
GIRLS MIDDLE SCHOOL
KUZHITHURAI

ANNEXURE X

TOOL FOR DATA COLLECTION (ENGLISH)

TOOL 1

A. DEMOGRAPHIC VARIABLE PROFORMA

SAMPLE NO: ☐

INSTRUCTION: Kindly place a tick mark ☑ against the option which you feel as appropriate.

1. Age of the mother (in years)

a) ≤ 20 ☐

b) 21-25 ☐

c) 26-30 ☐

d) >30 ☐

2. Education

a) Illiterate ☐

b) Primary school certificate ☐

c) Middle school certificate ☐

d) High school certificate ☐

e) Intermediate or post high school diploma ☐

f) Graduates or PG ☐

g) Professionals or honours ☐

h) Others ☐

3. Occupation

a) Professional ☐

b) Semi professional ☐

c) Shop owner ☐

d) Skilled worker ☐

e) Semi skilled worker ☐

f) Unskilled worker ☐

g) Unemployed ☐

4. Family monthly income

a) ≥25000 ☐

b) 20000-24999 ☐

c) 15000-19999 ☐

d) 10000-14499 ☐

e) 5000-9999 ☐

f) <5000

5. Type of family

a) Nuclear ☐

b) Joint ☐

c) Broken family ☐

d) Extended family ☐

6. Religion

a) Hindu ☐

b) Muslim ☐

c) Christian ☐

d) Others ☐

7. Area of residence

a) Rural ☐

b) Semi rural ☐

c) Urban ☐

d) Semi urban ☐

B. CLINICAL VARIABLE PROFORMA

INSTRUCTION: Kindly place a tick mark ☑ against the option which you feel as appropriate.

1. Dietary pattern

a) Vegetarian ☐

b) Non-vegetarian ☐

2. Parity

a) One ☐

b) Two ☐

c) Three ☐

d) Above three ☐

gFjp I

m) Nehahspapd; nghJ tptuk;

gapw;rpf;F Njh;T nra;j eghpd; vz;zpf;if: ☐

Fwpg;G: fPNo nfhLf;fg;gl;Ls;s Nfs;tpfSf;F rhpahd tpilia Njh;e;njLj;J mjw;Fhpa fl;lj;jpy; rhp ☑ FwpapLf

1) taJ tuk;G

   1. 20 tajpw;F fPo; cs;Nshh; ☐
   2. 21 taJ Kjy; 25 taJ tiu cs;Nshh; ☐
   3. 26 taJ Kjy; 30 taJ tiu cs;Nshh; ☐
   4. 30 tajpw;F Nky; cs;Nshh; ☐

2) fy;tpj;jFjp

   1. gbg;gwptpy;yhjth; ☐
   2. njhlf;fepiyf;fy;tp ☐
   3. ,ilepiyf;fy;tp ☐
   4. cah; epiyf;fy;tp ☐
   5. Nky; epiyf;fy;tp ☐
   6. gl;ljhhp my;yJ KJfiygl;ljhhp ☐
   7. njhopy;Kiwf;fy;tp ☐
   8. gpw fy;tp ☐

3) njhopy; tptuk;

   1. gapw;rpngw;w njhopyhsh; ☐
   2. ,ilgl;l gapw;rpngw;w njhopyhsh; ☐
   3. fil chpikahsh; ☐
   4. jpwikahd njhopyhsh; ☐

5. ,ilgl;l jpwikahd njhopyhsh; ☐
6. gapw;rpngwhj njhopyhsh; ☐
7. Ntiyapy;yhjth; ☐

4) khj tUkhdk;

1. &gha; 25000 my;yJ mjw;F Nky; ☐
2. &gha; 20000 Kjy; 24999 ☐
3. &gha; 15000 Kjy; 19999 ☐
4. &gha; 10000 Kjy; 14999 ☐
5. &gha; 5000 Kjy; 9999 ☐
6. &gha; 5000 jpw;F fPo; ☐

5) FLk;g tif

1. jdpf;FLk;gk; ☐
2. $l;Lf;FLk;gk; ☐
3. gpsTgl;l FLk;gk; ☐
4. ngupa FLk;gk; ☐

6) kjk;

1. ,e;J ☐
2. fpwp];jth; ☐
3. K];yPk; ☐
4. gpw kjk; ☐

7) thOkplk;

1. efh;g;;Gwk; ☐
2. ,ilgl;l efh;g;;Gwk; ☐
3. fpuhkg;Gwk; ☐
4. ,ilgl;l fpuhkg;Gwk; ☐

M) kUj;Jtrk;ke;jkhd fhuzpfs;

Fwpg;G: fPNo nfhLf;fg;gl;Ls;s Nfs;tpfSf;F rhpahd tpilia Njh;e;njLj;J mjw;Fhpa fl;lj;jpy; rhp ☑ FwpapLf

1) czT Kiw

1. irt czT Kiw ☐
2. mirt czT Kiw ☐

2) gpurt vz;zpf;if

1. xd;W ☐
2. ,uz;L ☐
3. %d;W ☐
4. %d;wpw;F Nky; ☐

TOOL II

VERBAL DESCRIPTIVE PAIN SCALE (Jack Harich, 2002)

SAMPLE NO	EXPERIMENTAL GROUP I								EXPERIMENTAL GROUP II							
	LEVEL OF EPISIOTOMY PAIN								LEVEL OF EPISIOTOMY PAIN							
	PRETEST 1st DAY				POSTTEST 5th DAY				PRETEST 1st DAY				POSTTEST 5th DAY			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
TOTAL SCORE																

POINTS	LEVEL OF PAIN	DESCRIPTION
0	No pain	No pain. Feeling perfectly normal
1	Mild pain	Does not interfere with most of the activities. Able to adapt to pain psychologically and with medication or comfort devices
2	Moderate pain	Interferes with many activities. Requires lifestyle changes but mother remains independent. Unable to adapt pain.
3	Severe pain	Unable to engage in normal activities. Mother is disable and unable to function independently.

- No pain -0
- Mild pain -1
- Moderate pain -2
- Severe pain -3

TOOL III

REEDA SCALE

POINTS	REDNESS	EDEMA	ECCHYMOSIS	DISCHARGE	APPROXIMATION
O	None	None	None	None	Closed
1	Within 0.25cm of incision bilaterally	<1cm from incision	Within0.25cm bilaterally or 0.5cm unilaterally	Serum	Skin separates 3mm or more
2	Within 0.5cm of incision bilaterally	1-2cm from incision	0.25-1cm bilaterally or 0.5-2 cm unilaterally	Sero-sanguinous	Skin and subcutaneous fat separates
3	Beyond 0.5cm of incision bilaterally	>2cm from incision	>1 cm bilaterally or >2 cm unilaterally	Bloody purulent	Skin and subcutaneous fat and fascia separates

- No infection -0
- Mild infection -1 to 5
- Moderate infection -6 to 10
- Severe infection -11 to 15

TOOL III: REEDA SCALE

SAMPLE NO: **EXPERIMENTAL GROUP:**

REEDA SCALE	WOUND HEALING SCORE															
	PRETEST				POSTTEST				PRETEST				POSTTEST			
	1 st DAY				5th DAY				1st DAY				5th DAY			
	0	1	2	3	0	1	2	3	0	1	2	3	0	1	2	3
Redness **0** None **1** Within 0.25cm **2** Within 0.5cm **3** Beyond 0.25cm																
Edema **0** None **1** <1cm from incision **2** 1-2 cm from incision **3** >2 cm from incision																
Ecchymosis **0** None **1**Within0.25cm bilateral or 0.5cm unilaterally **2** 0.25-1 cm bilaterally or 0.5-2 cm unilaterally **3** <1 cm bilaterally or >2 cm unilaterally																
Discharge **0** None **1** Serum																
2 Sero-sanguinous **3** Bloody purulent																
Approximation **0** Closed **1** Skin separates 3mm or more **2** Skin and subcutaneous fat separates **3** Skin, subcutaneous fat and fascia separates																
TOTAL SCORE																

ANNEXURE XI

MASTER SHEET FOR EXPERIMENTAL GROUP I

Sl. No	Age	Education	Occupation	Family monthly income	Type of family	Religion	Area of Residence	Dietary pattern	Parity
1	c	c	g	b	a	c	c	b	b
2	a	e	f	a	a	a	c	b	c
3	c	d	e	c	a	c	a	b	c
4	b	f	g	b	a	c	a	b	b
5	c	g	e	d	a	c	a	b	b
6	c	d	d	e	b	a	a	b	b
7	a	e	g	d	a	a	a	a	a
8	c	d	a	c	a	b	a	b	b
9	d	d	d	b	a	c	a	b	b
10	d	c	e	d	d	a	c	b	b
11	c	e	f	c	a	c	c	b	b
12	d	d	e	b	a	a	a	b	b
13	c	f	a	b	a	c	a	b	c
14	b	e	d	a	a	b	a	a	b
15	c	c	a	c	a	a	a	a	a
16	c	g	f	b	a	a	a	b	b
17	b	e	e	b	d	a	c	b	b
18	c	d	g	c	d	c	a	b	b
19	c	d	f	c	a	a	a	b	b
20	d	g	a	d	b	c	a	b	b
21	b	f	d	c	a	a	a	b	b
22	d	e	f	e	a	a	a	b	a
23	b	c	g	a	a	c	a	b	b
24	d	f	f	d	a	c	a	b	b
25	d	d	g	e	a	a	a	b	c
26	d	e	e	e	a	a	c	b	b
27	d	c	g	d	a	c	c	b	b
28	b	d	f	d	a	a	b	b	b
29	b	d	f	c	a	a	b	b	c
30	b	g	g	b	a	c	c	b	a

MASTER SHEET FOR EXPERIMENTAL GROUP II

Sl . No	Age	Education	Occupation	Family monthly income	Type of family	Religion	Area of Residence	Dietary pattern	Parity
1	c	c	d	b	a	c	c	b	b
2	d	e	f	a	a	a	c	b	c
3	c	d	e	c	a	c	a	b	c
4	b	f	g	b	a	c	a	b	a
5	c	g	d	d	a	c	a	b	b
6	c	d	d	e	b	a	a	a	b
7	a	e	g	d	a	a	a	a	a
8	c	d	a	c	b	b	a	b	b
9	d	d	d	b	a	c	a	b	b
10	d	d	e	d	d	a	a	b	b
11	c	e	d	c	a	c	c	b	b
12	d	d	e	d	a	a	a	b	b
13	c	f	a	e	a	c	a	b	c
14	b	f	d	c	a	b	a	a	b
15	c	c	a	c	a	c	a	a	a
16	c	g	f	b	a	c	a	b	b
17	b	e	e	b	d	a	c	b	b
18	c	d	g	c	d	c	a	b	b
19	c	d	f	c	a	a	a	b	b
20	d	g	a	d	b	c	a	b	b
21	b	f	d	c	a	a	a	b	b
22	d	f	f	e	a	a	a	b	a
23	b	c	d	a	a	c	a	b	b
24	d	f	f	d	a	c	a	b	b
25	d	d	g	e	a	a	a	b	c
26	d	e	e	e	a	a	c	b	b
27	d	c	g	d	a	c	c	b	b
28	b	d	f	d	a	a	b	b	b
29	b	d	f	c	a	a	b	b	c
30	b	g	g	b	a	c	c	b	a

ANNEXURES XII

PHOTOGRAPHS

CHAPTER-I

"Temporary, but excruciating, pain is the price of healing"

- **VironikaTugaleva**

(Author of Love Mindset)

INTRODUCTION

Postpartum is a very special period for a women and her family. It is usually joyful when a pregnant mother gives birth to a baby whom she has expected. Despite the pain and discomfort, birth is a long awaited grand ending of a pregnancy and a start of a new life. Mother is the beginning of a new chapter of human life. The process of labor not only generates new life but also it creates new species in the world thereby make the world as an ever ending place for the human beings to live. That's why mothers are special and labor is precious.

WHO recommends episiotomy rate of 10% for normal deliveries. In India the incidence of episiotomy is also being very high (72.3%) per thousand births (2010). Pain following episiotomy appears to be universal. The mother who is undergoing episiotomy is characterized by greater blood loss in conjugation with delivery, and there is a risk of improper wound healing and increased pain during early puerperium.

Episiotomy can be associated with extension or tear into the muscle of the rectum or even the rectum itself and may also lead to infection, bleeding, swelling, defects in wound closure, local pain and a short term possibility of sexual dysfunction.

Various intervention are found to reduce episiotomy pain and enhance healing process, which includes administration of analgesics, applying ice pack, topical application by dry heat (infra-red therapy), Sitzbath, performance of kegel's exercise and perineal care **(Helen et al 2010)**. A Sitzbath promotes wound healing by cleaning the perineum and anus, increasing circulation and reducing inflammation, helps to relax local muscles.

It is vital that health professionals who care for the puerperant mother knows how to evaluate and treat perineal pain. Considering the high rates of perineal trauma after normal deliveries that still exist in our population, it is necessary to offer these mothers alternative treatments for perineal pain and wound healing based on scientific evidences.

BACKGROUND OF THE STUDY

Episiotomy was not widely used until 1920's. In addition to the strong advocacy for the use of episiotomy of the day, changes in maternity practices also affected the use of episiotomy. The shift from home birth to hospital delivery contributed to a shift in the conceptualization of the nature of childbirth. This shift made episiotomy as a common surgical procedure performed during second stage of labor to enlarge the vaginal introitus and to shorten the second stage of labor in case of fetal distress. Episiotomy is protective against severe perineal laceration.

Global Scenario

In Australia in 2012, the average rate of episiotomy was 15%. The rate of women who had no tear or small tear that may not require stitches was on average of about 55%.On a worldwide level, Australia compares quite well when it comes to performing episiotomies. The episiotomy rate in the United States is currently around 35%. In some Latin American countries and also Taiwan, it is an accepted practice to do an episiotomy on all first time mothers. Here the rates are closer to 90%. China, Spain, South Africa and Turkey also report extremely high episiotomy rates ranging from 60% to almost 90%, whereas Sweden reports a low rate of 9.7%.

Approximately 33% of women with vaginal delivery had episiotomy in 2011**(American College of Obstetricians-Gynecologists, 2012).**Studies reported that 10% of women experiences pain for more than2 months after spontaneous vaginal delivery and the rate rise to 30% for those who had an assistant vaginal birth (**Punasundri *et al*., 2011;).**One recent study revealed that episiotomy was performed in 97.3% of 510 primiparous women who had vaginal delivery in Tehran (**Shojaei *et al*., 2009).**

Epidemiological studies of **National Childbirth Trust** in 2011 produced figures for episiotomy in UK. The percentage of episiotomy was found to be 15% in England, 13% in Scotland, 10% in Wales and 22% in Northern Ireland. There was however a considerable international variation in the rate of episiotomy. According to the **Royal College of Obstetricians and Gynecologists (RCOG)**, it was 8% in Holland, 14% in England, 50% in the USA and 99% in Eastern Europe.

Indian Scenario

According to **WHO**, the birth rate in India during the year 2009 was 21.76 per thousand live births and the incidence of episiotomy is also high. It has been reported that 23 percent of women have health problems in first month after delivery related to episiotomy as perineal tear, urinary incontinence, and uterine prolapse. According to report during the year June 2008, the prevalence of episiotomy procedure was 1.6 million in 1992 versus 7, 16,000 in 2003.

In India, the overall rate of episiotomy was 40.6%. Among them the midwives performed episiotomies at a lower rate of (21.4%) than faculty with (33.3%) and private care providers with (56.6%). The need for the Sitzbath during episiotomy is represented by a reduction of mean score from 4.1 to 0.15 and standard deviation from 0.66 to 0.3. The episiotomy rate in Karnataka is approximately 88% women who are undergoing difficult labour. In Bangalore, the rate of episiotomy for vaginal birth ranges from 31% to 95% of the grand total of 3590 vaginal deliveries (2010).The episiotomy rate in Tamilnadu is approximately 88% women who are undergoing difficult labour.

One of the major reasons for maternal mortality in India was sepsis (15%) over the wound **(Hiremath DA** and **Hiremath LD 2008)**.In 2013,29.1% of births were delivered by caesarean section and 60% by vaginal delivery. **Gupta M C and Mahajan BK (2013)** reported that in Delhi, the main cause of maternal mortality was sepsis which accounts to 28%.In India 23% of women report health problem in the first month after delivery related to episiotomy as perineal tear, urinary incontinence and uterine prolapse. In developed countries, maternal mortality varies from 4-20/1000 births. In developing countries, the maternal mortality is 20-30 times higher than developed countries.

There are several treatments for relieving perineal pain and promoting wound healing. Pharmacological and non-pharmacological methods are used to treat the discomfort. Pharmacological pain relief methods include non-steroidal anti-inflammatory drugs, oral analgesics, local anesthetics and opioids. But this method is associated with serious adverse effects such as constipation, gastric irritation, passage of the drug to maternal milk, and prolonged bleeding time.

With regard to non-pharmacological methods, common practices are the use of ice packs, and heat application. Ice packs during the first 24hours postpartum is a

traditional method used for the immediate symptomatic relief of pain since it anesthetizes the perineum, but this relief is generally short-lived, and there is no evidence of any long-term benefits. After 24 hours, heat is recommended because it increases circulation to the region. Forms of heat used are Sitzbath or infra-red lamp therapy application. It reduces perineal edema, prevents hematomas and discomfort, and thereby promotes wound healing.

NEED FOR THE STUDY

Spontaneous and surgical perineal traumas are frequent after normal delivery and can lead to relevant maternal morbidities. According to literature, a direct relation exists between the extent and complexity of the perineal lesions and the morbidities affecting those women in the postpartum period, mainly related to episiotomy. Among the morbidities that are due to the surgical incision made in the vaginal opening during birth, some can occur in the short term, such as; vaginal bleeding, infection and hematoma, which can interfere in the breast feeding process and enhance painful experience. In the long term, dyspareunia, urinary, fecal incontinence and pelvic floor problems can also occur.

Lew NS, Melissa K (2010) conducted a study to verify the evaluation of Lavender Oil effect on perineal pain and episiotomy wound healing among100 primiparous women with term pregnancies requiring surgical repair of episiotomy following a normal and spontaneous delivery. The effectiveness was assessed for perineal pain by VAS and wound healing by REEDA scale at first 24 hrs, 3rd, 5th and 7th day of postpartum. The data was analyzed with chi- square, mann-withny u and t-test and analysis in SPSS. There was no significant differences in perineal pain at first 24 hrs postpartum between two group (P=0.78), but perineal pain at 3rd (P=0.035), 5th (p=0.0) and 10th (P=0.04) days postpartum was comparatively less in Experimental group. In wound healing there was no significant difference between two groups at 3rd day postpartum (P=0.170) but at 5th day (0.002), and 10th day (P=0.0) there was a significant difference between two groups. The study concluded that the application of Lavender Oil was effective in relieving perineal pain and episiotomy wound healing.

Povidone-Iodine, with brand name as betadine is a chemical complex of polyvinyl pyrolidone and elemental iodine. It contains 9.0% to12.0% available iodine.

Iodine is absorbed into the body to various degrees, depending on application area and condition of the skin. Povidone-Iodine (betadine) is a broad spectrum antiseptic for topical application in the treatment and prevention of infections in wounds. It contains antibiotics that work by slowing or stopping the growth of bacteria and thereby promotes wound healing and relieves pain.

Lavender also known as Lavandula angustifolia, is one of the most widely used, versatile herbs known today. It is considered a member of the labiates family. The chemical component of Lavender Oil are a-pinene, limonene, 1,8-cineole, cis-ocimene, 3-octanone, camphor, linalool, linalyl acetate, caryophyllene, terpinen-4-ol and lavendulyl acetate.

The therapeutic properties of Lavender Oil are antiseptics, analgesics, anti-convulsant, anti-inflammatory, antiviral, bactericide and sedative. Its cicatrisant properties help the skin heal faster and cytophylactic properties will help it do so with less scaring. The soothing and anti-inflammatory action of Lavender Oil will also have a balancing action of the skin.

During this procedure, care giver can talk and communicate with the mothers thereby reduces the fear and may increases comfort, during the postnatal days. The postnatal mother can do this independently in the home setting also when they get discharged from the hospital following the delivery. The maintenance of effective pain relief must be balanced with the need to promote wound healing. It is important that midwives recognize the need for research based practice in episiotomy care.

Researcher during her experience with postnatal mothers has found that most of the mothers who had undergone normal delivery with episiotomy wounds had complaints of pain, discomfort, infection delayed healing. Mothers were in great need for relief from pain and discomfort for effective breast feeding and provide baby care. The researcher feels that midwives have an important role in the care of perineal wounds following childbirth. This motivated the researcher to use Povidone Iodine Sitzbath and Lavender Oil Sitzbath for relieving episiotomy pain and promoting episiotomy wound healing. Hence the researcher rightly felt to conduct a comparative study on the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath for the management of episiotomy pain and wound healing among post natal mothers.

STATEMENT OF THE PROBLEM

A comparative study to assess the effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district.

OBJECTIVES OF THE STUDY

- To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To assess the effectiveness by comparing the post interventional level of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

HYPOTHESES

H_1: There will be a significant difference between the pre and post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_2: There will be a significant difference between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_3: There will be a significant association between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

OPERATIONAL DEFINITIONS

Assess

It refers to the process of monitoring the level of episiotomy pain and wound healing among post natal mothers.

Effectiveness

Effectiveness refers to the extent to which Povidone Iodine Sitzbath and Lavender Oil Sitzbath has produced desirable effects on healing of episiotomy pain and wound healing as measured by Jack Harich Verbal Descriptive Pain Assessment Scale and Davidson's REEDA Scale.

Povidone Iodine Sitzbath

Povidone Iodine Sitzbath is a bath in which perineal area/ buttocks are submerged in 4 litres of warm water having a temperature of 105^0F to 110^0F added with 5-6 drops of 10%Povidone Iodine for a period of 20 minutes for five consecutive days during morning and evening to promote wound healing and relieving pain.

Lavender oil Sitzbath

Lavender Oil Sitzbath is a bath in which perineal area / buttocks are submerged in 4 litres of warm water having a temperature of 105^0F to 110^0F added with 2 drops of commercially prepared Lavender Oil for a period of 20 minutes for five consecutive days during morning and evening to promote wound healing and relieving pain.

Episiotomy pain

Episiotomy Pain is the pain experienced by the postnatal mothers due to interference with tissue integrity and presence of episiotomy suture line which is assessed using the Jack Harich Pain Assessment Scale.

Episiotomy wound healing

Episiotomy wound healing indicates the absence of redness, oedema, ecchymosis, discharge and gapping of episiotomy wound.

Postnatal mother

Postnatal mother refers to the women who have undergone normal vaginal delivery with episiotomy in selected hospitals at Kanyakumari district.

Puerperal sterilization

Puerperal sterilization is a permanent surgical procedure that prevents women from becoming pregnant, which is performed soon after the birth of a child.

ASSUMPTION

The study assumes that

- Episiotomy wound produces pain and discomfort among postnatal mothers.
- Alternative and complementary therapies aid in improving the healing of episiotomy wound.
- Povidone Iodine Sitzbath helps in healing episiotomy wound and also prevents infection.
- Administration of Lavender Oil Sitzbath may heal episiotomy wound.
- Postnatal mothers with episiotomy may be prone to develop complications.

DELIMITATION

The study was delimited to

- 60 Postnatal mothers undergone normal vaginal delivery
- the period of five days for each postnatal mother.
- time duration of 20 minutes for Sitzbath in morning and evening.

PROJECTED OUTCOME

- The study helps to find out the level of pain and wound healing among postnatal mothers undergone normal vaginal delivery.
- The study helps to find out the association between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables such as age, education, occupation, family monthly income, place of living, religion, type of family, dietary pattern and parity.
- The study helps to find out the effectiveness of administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in both experimental groups.

CONCEPTUAL FRAMEWORK

Conceptual framework is interrelated concepts or abstractions that are assembled together in some rational schemes by virtue of their relevance to a common theme.

(Polit and Beck)

Conceptual framework deals with concepts assembled together by the writer relevant to the research problem which provides certain framework of reference for clinical practice, research, and education.

The conceptual framework used for the present study is adopted from General System Theory introduced by Ludwig Von Bertalanffy (1968). According to this theory, a system is a group of elements that interact with one another in order to achieve the goal.

An individual is a system because she receives input from the environment. This input consists of information, material or energy that enters the system. This input, when processed, provides an output. All living systems are open, in that there is a continual exchange of matter, energy, and information. It is the energy, matter, or information disposed by the system as a result of its process.

This system is cyclical in nature, and continues to be so, as long as the four components -input, process, output, and feedback keep interacting with each other. If there are changes in any of the components, there will be alterations in all the components. Feedback from within the system or from the environment provides information which helps the system to determine whether it is meeting its goal.

In the present study, concepts can be explained as follows

Input

It consists of information, material, or energy that enters the system. In this study, it refers to postnatal mothers who have undergone normal vaginal delivery. The input includes demographic variables and clinical variables such as age, education, occupation, family monthly income, and place of living, religion, type of family, dietary pattern and parity of postnatal mothers. Pre-test assessment of episiotomy wound is done with help of Verbal Descriptive Pain Assessment Scale and Davidson's REEDA Scale.

Process

It is the action needed to accomplish the desired tasks, to achieve the desired output.

In this study, it refers to the administration of Povidone Iodine Sitzbath to experimental group I and Lavender Oil Sitzbath to experimental group II on episiotomy wound, twice a day for five days.

Output

It refers to the energy, matter or information disposed of by the system as a result of its process.

In the present study, it refers to post-interventional assessment of episiotomy wound healing and pain as evidenced by decreased pain score and enhanced wound healing done with the help of Verbal Descriptive Pain Assessment Scale and Davidson's REEDA Scale.

Feedback

Feedback is a process whereby output of the system is redirected as part of the input to the same system. Feedback is not included in this study.

Environment

Individual environment is a consent that influences the system.

Environment refers to the postnatal ward in selected hospitals at kanyakumari district.

SUMMARY

This chapter has dealt with the objectives, the operational definitions, variables, assumptions and hypotheses which are predictive statements of the relationship between the independent and dependent variables, and delimitations of the study. The conceptual framework of the present study was based on the Ludwig's General System Theory.

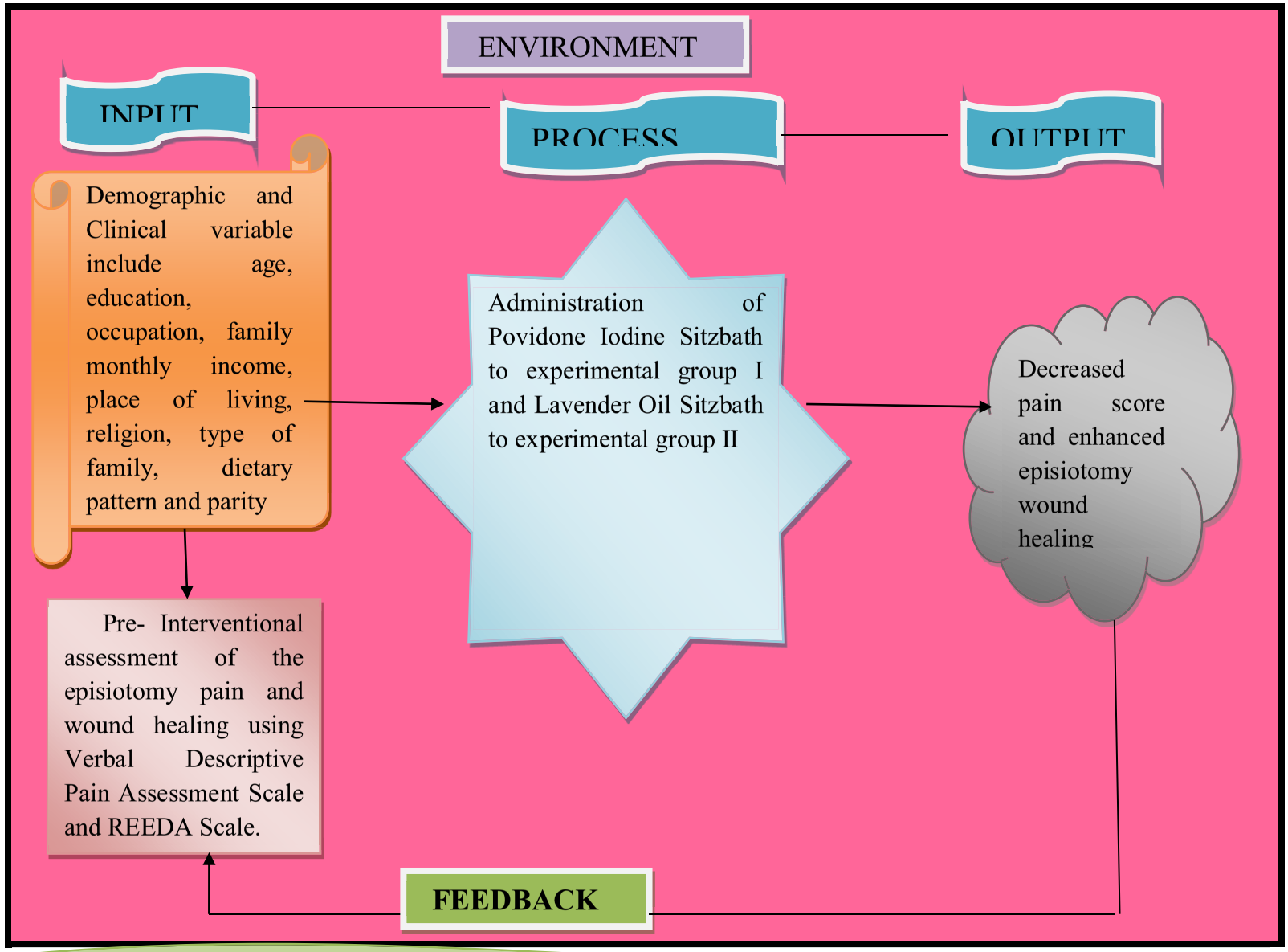


Fig 1: Conceptual framework based on General System Theory introduced by Ludwig Von Bertalanffy (1968).

CHAPTER-II

REVIEW OF LITERATURE

Review of literature is a key step in research process. Review of literature is a systematic identification, scrutiny and summary of written material that contains information on research problem. It refers to extensive, exhaustive and systematic examination of publications relevant to the research project. The researcher analyse the existing knowledge before delving into a new area of study, while conducting a study, when interpreting the results of the study, and when making judgments about application at a new knowledge in nursing practice.

The review of literature is defined as a broad, comprehensive in depth, systematic and critical review of scholarly publications, unpublished scholarly print materials, audio visual materials and personal communications.

(Basavanthappa)

The researcher presents the review of literature, which helps to study the problem in depth. It also serves as a valuable guide to understand what has been done and what is still unknown and untested.

The reviewed literature provides the evidence of what has been studied in the past and published; paving way for further study in the chosen subject. It justifies the need for study; throws light on the feasibility of the study, reveals methodology and relates the findings from one another with a hope to establish a comprehensive study of scientific knowledge. The researcher did an extensive search of existing literature and organized it under following headings

I. Reviews related to Episiotomy
II. Reviews related to selected pain reduction and wound care strategies on episiotomy pain and wound healing
III. Reviews related to effectiveness of Povidone Iodine Sitzbath on episiotomy pain and wound healing
IV. Reviews related to effectiveness of Lavender Oil Sitzbath on episiotomy pain and wound healing

I. Reviews related to Episiotomy

Sathiyasekaran. BWC., (2012)conducted a population based study to estimate episiotomy rate in a rural population and also to find out whether higher episiotomy rate is associated with place of delivery and category of health care provider. Sample of 442 mothers who had vaginal delivery were included for the study. Cluster sampling was used to select the study samples. The episiotomy rate for women whose delivery conducted by doctors were 77.4% and those conducted by nurses were 53.1%. Higher episiotomy rate of 91.8% was found in private medical college hospitals compared to primary health centre. Hence the study concluded that Episiotomy rate in the study population is high.

Alayande. BT., Amole. IO., David. A., (2012) conducted a study on "relative frequency and predictors of episiotomy" to determine the rate and risk factors for episiotomies .This retrospective study extracted information on age, occupation, parity, type of vaginal delivery, birth weight of the newborn, and episiotomy status from the case notes of 280 patients and analyzed it using the SPSS version 13. The episiotomy rate was 34.3% in the present study. The rate of episiotomy decreased with parity, with nulliparous having the highest rate of 62.2%. The rate was higher among those who had assisted delivery 80.0% than spontaneous delivery. The episiotomy rate at this centre is high 34.3% in comparison to the recommended 10% by the WHO. Nulliparity and assisted vaginal delivery appear to be the risk factors for episiotomy in this centre.

Williams. FL.,(2012) conducted across-sectional study to determine the rates and to describe the risk factors for episiotomy and perineal tear among low-risk primigravidae and number and degree of perineal tears the subjects were 40 consecutive low risk primigravidae in each hospital. A large proportion of 83 %women experienced some form of perineal trauma. 40% of the women had an episiotomy only, 6% of women had episiotomy and perineal tear, and 37% of women had perineal or other tears without episiotomy. The main reason for performing an episiotomy was foetal distress (27%), impending tear (25%) and delay in second stage of labour (21%). Episiotomy rates varied appreciably throughout regions and hospitals in India, ranging from 26 to 67%.The study was concluded that the rates of episiotomy in women from the Indian sub-continent and Orient were very high compared with those among white women.

Judith Angelita., Noronha., (2008) conducted a study to assess the effectiveness of teaching on episiotomy and perineal care among primipara women in selected hospitals at Karnataka, by using convenient sampling technique. The study was conducted in 2 phases. In phase I of the study, the data were collected among 30 primipara women to identify the learning needs of primipara mothers in terms of knowledge and ability to perform self perineal care. The phase 2 of the study consisted of 25 subjects in the experimental group, 30 subject in control group. The results showed that planned teaching programme was effective in increasing the knowledge (t=23) and ability (t=24.34) of the experimental group.

II. Reviews related to selected pain reduction and wound care strategies on episiotomy pain and wound healing

Venkadalakshmi.V.,Venkatesan Latha., Perdita.M.Helen.,(2009), conducted an experimental study to determine the effectiveness of infra red lamp therapy on episiotomy wound healing and pain in selected Hospitals at Kovilpatti, Tamil Nadu. The control group (n=30) used the existing methods of episiotomy care whereas, the subjects of the experimental group (n=30) were provided with the infrared therapy for 10 minutes for 3 days. Result reveals that the mean episiotomy pain score of the control group participants was high on all three days in comparison with the experimental group and 10% of the participants in the control group developed mild infection but none in experimental group hence, the result was statistically significant ($p<0.001$).The study concluded that infrared therapy is effective in managing episiotomy pain and wound healing.

Bowel Rina.,(2010) conducted an experimental study to compare the effect of cold pack versus infrared radiation on episiotomy wound among 60 postnatal mothers in Vellore. They were randomly divided into cold therapy group and infrared therapy group. One hour after the completion of the intervention, the result reveals that 76.6 % mothers did not have pain at all and 23.3% mothers experienced very mild pain in cold therapy group whereas 66.6% had mild pain and 33.7% had moderate to severe pain in infrared therapy group. This difference was statistically significant. In conclusion, both cold pack and infrared therapy was recommended for treating episiotomy wound.

Hur et al.,(2009) conducted a study to verify the effect of aroma-sitz bath with aroma- soap application on perineal healing among 100 postpartum mothers. The effectiveness was assessed by REEDA scale and smear of episiotomy wound. The data were analyzed by repeated measures of ANOVA, ANCOVA and chi square test. The study states that REEDA scale was significantly low in the experimental group at postpartum 5^{th} and 7^{th} day (P=.0009, P=.003) and few bacteria were observed in the smears of episiotomy wound. In the study, it was concluded that aroma-Sitzbath is more effective in healing episiotomy.

Prof.Vijayalakshmi., (2009) conducted a comparative study to evaluate the effectiveness of Infrared radiation therapy versus Warm Sitzbath on level of pain in episiotomy in a selected hospitals at Salem in Tamilnadu. A total of 30 samples were selected by simple random sampling technique. Levels of pain were assessed with Verbal Descriptor Scale during the first and second day. Infrared radiation was given initially to experimental group I and Warm Sitzbath to experimental group II for 2 consecutive days. The level of pain was assessed after 30 minutes of intervention. The findings of the study states that Warm Sitzbath was significant than Infrared radiation therapy

III. Reviews related to effectiveness of Povidone Iodine Sitzbath on episiotomy pain and wound healing

Dhanalakshmi. V., (2010) conducted an experimental study to determine the effectiveness of infrared therapy and Povidone-Iodine Sitzbath of episiotomy wound healing at Coimbatore in Tamil Nadu. 30 samples were randomly selected for the study, 15 each in two experimental groups. One experimental group was selected for infrared therapy and other for Sitzbath therapy for three days in the morning and in the evening. Results revealed that mother who had undergone the treatment of infrared therapy expressed decrease in pain intensity compared to mothers who had undergone the Povidone-Iodine Sitzbath. In conclusion, infrared light therapy and Povidone-Iodine Sitzbath were found to have same effect in the episiotomy wound healing.

Anita Sali., (2007)conducted a comparative study to find the effect of Povidone-Iodine Sitzbath versus Guggul Dhupan on episiotomy pain among postnatal mother admitted in Pune hospital. 60 postnatal mothers were selected for this study, 30 postnatal mothers were given Povidone-Iodine Sitzbath and 30 postnatal mothers were given

Guggul Dhupan. According to self - assessment score, maximum (53.3%) postnatal mothers were having mild pain after giving Povidone-Iodine Sitzbath and this difference was statistically significant, maximum (63.3%) postnatal mothers were having severe episiotomy pain before Guggul Dhupan and 80% of postnatal mothers were having mild pain after Guggul Dhupan. The study concluded that Povidone-Iodine Sitzbath is effective in reducing episiotomy pain.

Ramler. D., Roberts. J., (2007) conducted a quasi experimental study to assess the effect of Povidone-Iodine Sitzbath versus Self perineal care on episiotomy wound healing. 40 postnatal mothers were selected. 20 postnatal mothers were given Povidone-Iodine Sitzbath and 20 mothers were taken Self perineal care. The findings denote that Povidone-Iodine Sitzbath has significant influence in wound healing. The study revealed that REEDA score was significantly low (p=0.007) in the experimental group. The study concluded that Povidone-Iodine Sitzbath is effective in episiotomy wound healing.

IV. Reviews related to effectiveness of Lavender Oil Sitzbath on episiotomy pain and wound healing

Bekhradi. R., (2012) conducted a study by using Lavender Oil and placebo effect for perineal wound healing among 635 women who had undergone normal vaginal delivery. The mean discomfort score was lower in women using Lavender Oil. 31 individuals (51.7%) in the Lavender group and 13 individuals (21.7%) in the control group had no redness (p = 0.001). The study concluded that "use of lavender oil for perineal healing is effective".

Vakilian. K., Atarha. M., Chaman. R.,(2011)conducted a comparative study to assess the effect of Lavender oil Sitzbath versus Povidone Iodine treatment on episiotomy wound healing among 120 primiparae women with singleton pregnancies who had received medio-lateral episiotomies during spontaneous vaginal deliveries. The samples were in 2 groups, 60 women with lavender oil and 60 women with Povidone-Iodine Sitzbath. The Lavender Oil Sitzbath involves 5-7 drops of Lavender essential oil in 4 L of water for 10 days. The control group received Povidone-Iodine antiseptic .On the 10^{th}day after child birth**,** the control and Lavender Oil group had no pain (0.063), no redness (0.001). The study concluded that Lavender Oil Sitzbath was the most suitable therapy for episiotomy wound healing.

Beulah., (2013) conducted a study to assess the effectiveness of Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers in George Mission hospitals, at Kanyakumari district. The study with 30 postnatal mothers in experimental and control group. The episiotomy wound healing and pain perception was assessed on the 1st, 3rd, 5thpostnatal day. The study concluded that Lavender Oil Sitzbath is effective with "t" value of 6.32 and P=0.05 on episiotomy pain and wound healing.

Sheikhan. F., Jahdi., (2012) conducted a study to assess the effectiveness of Lavender oil essence on reducing perineal discomfort following episiotomy among 60 qualified primiparous women admitted for labour. They were randomly categorized into 2 groups: case group using Lavender Oil and control group following hospital protocol. Pain and discomfort were recorded using Visual Analogue Scale and REEDA Scale. Pain was evaluated at 4th hr, 12thhr and 5th day following episiotomy. Collected data was analyzed using t-test and chi-square test. There was a statistical difference in pain scores after 4th hr ($p = 0.002$) and 5th day ($p = 0.000$) after episiotomy and REEDA score was significantly lower on 5 day after episiotomy ($p = 0.000$). They concluded that use of Lavender Oil can be effective in reducing perineal discomfort following episiotomy.

Molkizadehet al., (2010) conducted a study to verify the Lavender cream effect on perineal pain and episiotomy wound healing among 100 primiparous women with episiotomy following a normal and spontaneous delivery at Moderre's hospital in Kashmir. The Pain was assessed by VAS and wound healing by REEDA Scale at first 24hrs, 3rd, 5th and 7th postpartum day. The data was analyzed with chi- square and t-test. The results showed that there was no significant differences in perineal pain at first 24hrs postpartum between two group (P=0.78), but perineal pain at 3rd (P=0.035), 5th (p=0.0)and 10th (P=0.04) days postpartum was less in experimental group. In wound healing there was no significant difference between two groups at 3rd and 5th day and 10thday (P=0.0) there was significant difference found between two groups. The study concluded that topical application of lavender cream was effective.

SUMMARY

This chapter had dealt with the reviews related to episiotomy, selected pain reduction and wound care strategies on episiotomy pain and wound healing, Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing.

CHAPTER-III

RESEARCH METHODOLOGY

Research methodology involves the systematic procedures by which the researcher starts from the initial identification of the problem to its final conclusion. It involves steps, procedures and strategies for gathering and analyzing data in a research investigation.

Denise F. Polit (2011)

This chapter deals with the research methodology adapted for the proposed study and the different steps undertaken after gathering and organizing data for the investigation. It includes Research approach, Research design, Variables, Settings, Population, Sample, Sample size and Criteria for sample selection. Sampling techniques, Development of the tool, Validity, Reliability, Pilot study, Data collection procedure, Plan for data analysis and ethical clearance.

RESEARCH APPROACH

A research approach tells the researcher what to collect and how to analyze it. It also suggest possible conclusion to be drawn from the data, in view of the nature of the problem under study and to accomplish the objectives of the study.

Densie. F. Polit (2011)

The investigator examined causal relationship to determine the effect of one variable on another. It involved implementing intervention and examining the effect of Povidone-Iodine and Lavender Oil in Sitzbath using selected methods of measurement. The quantitative approach was considered as the most appropriate for this study.

RESEARCH DESIGN

Research design is researcher overall plan for answering the researcher question.

Polit (2004)

To evaluate the effect of two selected nursing interventions the investigator selected quasi experimental design, pre test-post test only design.

O_1	X_1	O_2
O_3	X_2	O_4

$O_1$and O_3 = Pre-interventional assessment of episiotomy pain and wound healing

$O_2$and O_4 = Post interventional assessment of episiotomy pain and wound healing

$X_1$and X_2 = Administration of Povidone-Iodine Sitzbath and Lavender Oil Sitzbath

VARIABLES

Variables are defined as "An attribute that varies, that is, takes on different values".

Denise F. Polit (2011)

Variables are the qualities, properties, or characteristics of persons, things or situations that change or vary and are manipulated or measured in research.

Dependent variable

Dependent variable is defined as "the variable hypothesized to depend on or be caused by another variable of interest".

Denise F.Polit (2011)

In this study, the dependent variable was episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

Independent variable

Independent variable is defined as "The variable that is believed to cause or influence the dependent variable".

Denise F.Polit (2011)

In this study, the independent variables were administration of

- Povidone-Iodine Sitzbath and
- Lavender Oil Sitzbath

Extraneous variable

A variable that confronts the relationship between the independent and dependent variable and that needs to be controlled either statistically or in the research design.

Denise F.Polit (2011)

In this study, it refers to age, education, occupation, family monthly income, type of family, religion, place of living, dietary pattern and parity.

SETTING

Setting refers to physical location in which data collection takes place.

Denise F.Polit (2011)

The setting was chosen on the basis of availability of the samples and cooperation extended by the management. The study was conducted in Annammal hospital - Kuzhithurai, PPK hospital - Marthandam and Ratna hospital - Swamiyarmadam. All the three hospitals were specialized in the field of obstetrics and gynecology. Annammal hospital is 150 bedded hospital with 30 Out Patient per day in department of obstetrics and gynecology, also with statistics of 25 normal deliveries in each month. PPK hospital is situated at Marthandam. It is a 200 bedded hospital with normal deliveries around 30 per month. Ratna hospital is situated at Swamiyarmadam. It is specialized for obstetrics and gynecology. It has the statistics of 40 obstetrics and gynecological out-patient per day and 30 normal deliveries per month.

POPULATION

A Population is defined as "the entire set of individuals or objects having some common characteristics".

Denise F.Polit (2011)

In this study, the population consists of postnatal mothers who had undergone normal vaginal delivery.

Target population

Target population is the group of population that the researcher aim to study and to whom the study findings will be generalized.

Denise F.Polit (2011)

In this study, the target population comprises of postnatal mothers who had undergone normal vaginal delivery at Kanyakumari district.

Accessible population

The accessible population is the list of population that the researcher finds in study.

Denise F.Polit (2011)

The accessible population of this study was postnatal mothers who had undergone normal vaginal delivery in Annammal hospital, PPK hospital and Ratna hospital during data collection period.

SAMPLE

Sample is defined as "A subset of a population comprising those selected to participate in the study".

The sample consists of postnatal mothers who had undergone normal vaginal delivery in selected hospitals at Kanyakumari district.

Sample size

Sample size is defined as, "The number of people who participate in the study".

Denise F.Polit (2011)

The sample size for the study comprises of 60 postnatal mothers who had satisfied the inclusion criteria, 30 postnatal mothers in each experimental group.

Sampling Technique

Sampling technique is defined as "The process of selecting a portion of the population to represent the entire population".

Denise F.Polit (2011)

The participants of the study were selected by using non probability convenient sampling technique.

SAMPLING CRITERIA

Sampling criteria involves selecting cases that meet some predetermined criterion of importance. The criteria for sample selection are mainly depicted under two headings, which include the inclusion criteria and exclusion criteria.

Inclusion criteria

The study included Postnatal mothers who

- were willing to participate in the study
- were available at the time of data collection
- had undergone normal vaginal delivery with episiotomy
- had undergone puerperal sterilization

Exclusion criteria

The study excluded Post natal mothers who

- had undergone delivery with perineal tear or trauma
- had medical conditions like gestational diabetes mellitus

- had operative vaginal delivery
- had postnatal obstetrical complication

SELECTION AND DEVELOPMENT OF THE TOOL

Tool development is a complex and time consuming process. It consist of defining the construct to be measured formulating the items, assessing the items for content validity, developing instructions for respondents, pre-testing, estimating the reliability and conducting pilot-study.

Denise F.Polit (2011)

The following methods were used for development of the tool by the investigator.

- Review of literature from books, journals, other publication and websites.
- Discussion with subject experts like guides, obstetricians
- Review of the standardized tool.

DESCRIPTION OF THE TOOLS

The tools used for the study were demographic and clinical variable, Verbal Descriptive Pain Assessment Scale, REEDA Scale to assess the episiotomy pain and wound healing among postnatal mothers based on objectives and guidance of the experts.

TOOLS	TECHNIQUES	PURPOSE
Demographic and clinical variable Proforma	From the participants profile and information from the Postnatal mothers.	To assess demographic and clinical characteristics.
Verbal Descriptive Pain Assessment Scale	Assessing the level of Pain among Postnatal mothers.	To assess the level of Pain among Postnatal mothers.
REEDA Scale	Assessing the level of wound healing among Postnatal mothers.	To assess the level of wound healing among Postnatal mothers.

TOOL I: DEMOGRAPHIC AND CLINICAL VARIABLE PROFORMA

Demographic and clinical variables proforma was developed to obtain baseline characteristics. Demographic and clinical variables are the first part of the tool consist of nine items for obtaining information about the age, education, occupation, family monthly income, place of living, religion, type of family, dietary pattern and parity.

TOOL II: VERBAL DESCRIPTIVE PAIN SCALE (Jack Harich, 2002)

Verbal descriptive pain scales, as the name suggests, uses words to describe pain. Words such as no pain, mild pain, moderate pain, and severe pain were used to describe pain levels. A score from 0 to 3 was assigned to each and was used to measure the pain level.

Sl. No	SEVERITY	SCORING
1	No pain	0
2	Mild pain	1
3	Moderate pain	2
4	Severe pain	3

TOOL III: REEDA SCALE (Nancy Davidson's 1972)

REEDA is a scientific tool to assess episiotomy wound healing. It consists of 5 major items. Each item had given minimum score 0 and maximum score 3. The REEDA score ranges from 0 to 15. As score increases, it indicates higher rate of infection. If score decreases, it shows evidence of healing process. The maximum score was 15.

Sl. No	SEVERITY	SCORING
1	No Infection	0
2	Mild Infection	1-5
3	Moderate Infection	6-10
4	Severe Infection	11-15

VALIDITY OF THE TOOL

Validity is a degree to which an instrument measures what is intended to measure.

Denise F. Polit (2011)

To ensure the content validity, the prepared data collection tool along with problem statement, objectives, operational definitions, hypotheses, sampling technique and criteria checklist designed for validation were submitted to ten experts in the field like eight obstetrics and gynecology nursing personnel, one gynecologist and one statistician. The experts were requested to judge the items for relevance, appropriateness for the study. All the experts gave their consensus and the tool was finalized.

RELIABILITY

Reliability is the degree of consistency of dependability with which an instrument measures the attribute it is designed to measure.

Denise F. Polit (2011)

The Reliability of Verbal Descriptive Pain Assessment Scale and REEDA Scale was checked using Karl Pearson co-efficient formula with value 0.9, which was reliable.

PILOT STUDY

Pilot study is defined as, "a small- scale version or trial run, done in preparation of a major study."

Denise F. Polit (2011)

Pilot study was conducted in Annammal hospital, kuzhithurai during the month of November for a period of one week. Initial permission was sought from the institution and formal permission was sought from the medical officers for conducting the study. Consent was obtained from the participants. 6 postnatal mothers were selected. Three participant were administered Povidone Iodine Sitzbath and other three were administered Lavender Oil Sitzbath both morning and evening for five days. Results of the pilot study, gave the evidence that the tools were reliable. Finding of pilot study also revealed that it was feasible and practicable to conduct the study at the selected settings.

DATA COLLECTION PROCEDURE

Data collection is the gathering of information needed to address the problem. Initial permission was obtained from the research ethical committee. Formal permission was obtained from authorities of selected hospitals at Kanyakumari district. At first a rapport was established and purpose of the study was explained. Postnatal mothers who had undergone normal vaginal delivery with puerperal sterilization were selected. Verbal and written consent was taken. The sample of 60 postnatal mothers was selected. The pre test was done on first postnatal day by using Verbal Descriptive Pain Assessment Scale and REEDA Scale. Povidone Iodine Sitzbath was administered to experimental group I and Lavender Oil Sitzbath was administered to experimental group II with duration of 20 mins in morning and evening for five days. The post test was done on fifth postnatal day for both experimental groups with Verbal Descriptive Pain Assessment Scale and REEDA Scale. Towards end, researcher thanked postnatal mothers for their co-operation

The data collection profile includes

Sl. No	Date	Sample No	Annammal hospital		PPK hospital		Ratna hospital	
			Pre test	Post test	Pre test	Post test	Pre test	Post test
1	4-12-15	3	4-12-15	8-12-15	-	-	-	-
2	5-1-15	4	5-12-15	9-12-15	5-12-15	9-12-15	-	-
3	6-12-15	3	6-12-15	10-12-15	-	-	-	-
4	8-12-15	3	8-12-15	12-12-15	8-12-15	12-12-15	-	-
5	9-12-15	4	-	-	9-12-15	13-12-15	-	-
6	10-12-15	2	10-12-15	14-12-15	10-12-15	14-12-15	-	-
7	12-12-15	4	-	-	-	-	12-12-15	16-12-15
8	14-12-15	5	-	-	14-12-15	18-1-15	14-12-15	18-12-15
9	15-12-15	3	-	-	-	-	15-12-15	19-12-15
10	18-12-15	3	-	-	18-12-15	22-12-15	18-12-15	22-12-15
11	19-12-15	1	-	-	-	-	19-12-15	23-12-15
12	21-12-15	4	-	-	21-12-5	25-1-15	21-12-15	25-12-15
13	22-12-15	2	-	-	22-12-15	26-12-15	22-12-15	26-12-15
14	23-12-15	4	23-12-15	27-12-15	-	-	-	-
15	24-12-15	3	-	-	-	-	24-12-15	28-12-15
16	26-12-15	4	26-12-15	30-12-15	-	-	26-12-15	30-12-15
17	27-12-15	2	-	-	-	-	27-12-15	31-12-15
18	29-12-15	4	29-12-15	02-01-16	-	-	29-12-15	2-01-16
19	30-12-15	2	-	-	-	-	30-12-15	03-12-16

PLAN FOR DATA ANALYSIS

The data analyzed is the systemic organization and synthesis of research data and testing of research hypothesis by using the obtained data.

Polit & Beck (2007)

Data collected was analyzed using both descriptive and inferential statistics such as mean, standard deviation, chi square and unpaired‘t’ test.

Descriptive statistics

- Frequency and percentage distribution was used to assess demographic and clinical variables of postnatal mothers, level of episiotomy pain and wound healing.
- Mean and standard deviation was used to assess the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath.

Inferential statistics

- Un paired 't' test was used to evaluate and compare post interventional level of episiotomy pain and wound healing between Experimental groups I and II.
- Chi – square test was used to find out the association between the post interventional level of episiotomy pain and wound healing with the selected demographic and clinical variables in Experimental group I and II.

ETHICAL CONSIDERATION

- The pilot study and main study were conducted after the approval of the research ethical committee of Annammal Hospital and college of nursing, Kuzhithurai.
- Written consent was obtained from each postnatal mother before starting the data collection.
- Assurance was given to mothers regarding the confidentiality of data collected.

SUMMARY

This chapter has dealt with the selection about the research approach, research design, variables, setting of the study, population, selection criteria, development of tool, validity, reliability, pilot study, data collection, plan for data analysis and ethical considerations.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

Data analysis is defined as the method of organizing data in such a way that the research questions can be answered. Interpretation is the process of the results and of examining the simplification of the findings with in a broader context.

(Polit and Beck, 2004)

Statistics is a field of study concerned with techniques or methods of collection of data, classification, summarizing, interpretation, drawing inferences, testing of hypotheses, making recommendation, etc**.**

(Mahajan, 2004)

This chapter deals with the analysis and interpretation. Analysis and interpretation of data of this study was done by using descriptive and inferential statistics.

OBJECTIVES OF THE STUDY

- To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To compare the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected demographic and clinical variables.

ORGANIZATION OF THE FINDINGS

The data collected were edited, tabulated, analyzed, interpreted and findings obtained were presented in the form of tables and diagrams represented under the following sections.

Section I: Data pertaining to frequency and percentage distribution of demographic variables among postnatal mother's undergone normal vaginal delivery in Experimental group I and II.

Section II: Data pertaining to frequency and percentage distribution of clinical variables among postnatal mother's undergone normal vaginal delivery in Experimental group I and II.

Section III: Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy pain scores among postnatal mother's undergone normal vaginal delivery in Experimental group I and II.

Section IV: Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section V: Data pertaining to the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section VI: Data pertaining to effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section VII: Data pertaining to comparison of post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section VIII: Data pertaining to comparison of post interventional level of episiotomy wound healing scores among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section IX: Data pertaining to association between post interventional level of episiotomy pain and selected demographic and clinical variables in Experimental group I and II.

Section X: Data pertaining to association between post interventional level of episiotomy wound healing and selected demographic and clinical variables in Experimental group I and II.

Section I

Table 1: Data pertaining to frequency and percentage distribution of demographic variables among postnatal mother's undergone normal vaginal delivery in Experimental group I and II. (N=60)

Sl. N0	Demographic Variables	Experimental group I n=30		Experimental group II n=30		χ^2	P Value
		f	%	f	%		
1.	**Age of mother (in yrs)**						
	a) ≤20	2	6.67	1	3.33		df=3
	b) 21-25	8	26.67	8	26.67	0.559	
	c) 26-30	11	36.66	13	43.33		0.905
	d) >30	9	30	8	26.67		
2.	**Education**						
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	0	0		
	c) Middle school certificate	5	16.67	4	13.33		df=4
	d) High school certificate	10	33.33	11	36.66	0.892	
	e) post high school diploma	7	23.33	5	16.67		0.925
	f) Graduates or PG	4	13.33	6	20		
	g) Professionals or honours	4	13.33	4	13.33		
	h) Others	0	0	0	0		
4.	**Family monthly income**						
	a)≥25000	3	10	2	6.67		
	b) 20000-24999	8	26.67	6	20	0.722	
	c) 15000-19999	8	26.67	9	30		df=4
	d) 10000-14999	7	23.33	8	26.67		0.948
	e) 5000-9999	4	13.33	5	16.66		
	g) < 5000	0	0	0	0		
5.	**Type of family**						
	a) Nuclear	25	83.33	24	80		
	b) Joint	2	6.67	3	10	0.22	df=2
	c) Broken family	0	0	0	0		0.895
	d) Extended family	3	10	3	10		
6.	**Religion**						
	a) Hindu	15	50	13	43.33		
	b) Muslim	2	6.67	2	6.67	0.286	df=2
	c) Christian	13	43.33	15	50		0.866
	d) Others	0	0	0	0		

7.	**Area of residence**						
	a)Rural	22	73.33	23	76.67		
	b)Semi rural	0	0	0	0		df=1
	c) Urban	8	26.67	7	23.33	0.089	0.765
	d) Semi urban	0	0	0	0		

Table 1 represents the frequency and percentage distribution of postnatal mothers with selected demographic variables such as Age, Family monthly income, Type of family, Religion and Area of residence.

With regard to Age in Experimental group I and II, majority of Postnatal mothers 11(36.66%) and 13 (43.33%) falls between age group of 26-30 years, 9(30%) and 8(26.66%) were between the age group >30 years. 8((26.66%) were between the age group of 21-25 years. Also a least proportion of 2(6.67%) and 1(3.33%) were between the age group of ≤20 years of age.

With regard to Family monthly income, majority of Postnatal mothers 8 (26.67%) had an income between Rs.20000 - 24999and Rs 15000 - 19999 in Experimental group I, majority 9 (30%) had an income between Rs.15000 - 19999in Experimental group II.6 (20%) had an income between Rs.20000 - 24999in Experimental group II. In Experimental group I and II, 7 (23.33%) and 8 (26.67%) had an income between Rs.10000 - 14999, 4 (13.33%) and 5 (16.66%) had an income between Rs.5000 - 9999,3 (10%) and 2 (6.67%)had an income ≥ Rs.25000in both Experimental group I and II.

With regard to Type of family in Experimental group I and II, majority of Postnatal mothers 25(83.33%) and 24(80%) were from Nuclear family in both Experimental group I and II, 3 (10%) were from Extended family in both Experimental groups, 2(6.67%) and 3(10%) were from Joint family in both Experimental group I and II.

With regard to Religious status in Experimental group I and II, majority of Postnatal mothers 15(50%) were Hindus, 13(43.33%) were Christians in Experimental group I, where as in Experimental group II, Christians hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Comparatively among in both the groups Muslims were found limited in number of 2(6.67%).

With regard to the Area of residence in Experimental group I and II, majority of Postnatal mothers 22(73.33%) and 23(76.67%) were from rural background. Also a least proportion of 8(26.67%) and 7(23.33%) were from urban background.

Section II

Table 2: Data pertaining to frequency and percentage distribution of clinical variables among postnatal mother's undergone normal vaginal delivery in experimental group I and II. (N=60)

S.No	Clinical variables	Experimental group I n=30		Experimental group II n=30		χ^2	P Value
		f	%	f	%		
1.	**Dietary pattern**						
	a) Vegetarian	3	10	4	13.33	0.162	df=2
	b)Non-vegetarian	27	90	26	86.67		0.687
2.	**Parity**						
	a) One	4	13.33	5	16.67		
	b) Two	21	70	20	66.66	0.136	df=2
	c) Three	5	16.67	5	16.67		0.934
	d) Above three	0	0	0	0		

Table 2 represents the frequency and percentage distribution of postnatal mothers undergone normal vaginal delivery with selected Clinical variables such as Dietary pattern and Parity.

With regard to Dietary pattern in Experimental group I and II, majority of Postnatal mothers 27(90%) and 26(86.66%) were Non-vegetarian. Comparatively vegetarian hold the least proportion of 3(10%) and 4(13.33%).

With regard to Parity in Experimental group I and II, majority of Postnatal mothers 21(70%) and 20(26.66%) had Second Parity, whereas 5(16.66%) had Third Parity. Comparatively the least proportion of 4 (13.33%) and 5(16.66%) had first Parity.

Section III

Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Testing of hypothesis

H_1: There will be a significant difference between the pre and post interventional level of Episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table 3 : Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group I. (n= 30)

Episiotomy Pain Score	Experimental group I				χ^2	P Value
	Pre test		Post test			
	f	%	f	%		
Severe Pain (3)	12	40	0	0	25.513	df =3 0.00001 ***
Moderate Pain(2)	16	53.33	12	40		
Mild Pain(1)	2	6.67	15	50		
No Pain(0)	0	0	3	10		

(* **P<0.0001)

Table-3 shows the frequency and percentage distribution of pre and post interventional level of Episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group I. During pretest majority of the postnatal mothers, 16 (53.33%) had moderate pain, 12(40%) had severe pain and 2 (6.67%) had mild pain, where as in posttest majority of the postnatal mothers 15 (50%) had mild pain, 12 (40%) had moderate pain and 3(10%) had no pain. The Chi square value was 25.513, P value was 0.00001 which was significant at level of P<0.0001. Hence it shows that there was a significant difference in pre and post interventional level of episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group I.

Table 4 : Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group II. (n= 30)

Episiotomy Pain Score	Experimental group II				χ^2	P Value
	Pre test		Post test			
	f	%	f	%		
Severe Pain (3)	14	46.67	0	0	26.67	df =3 0.000008 ***
Moderate Pain(2)	14	46.67	6	20		
Mild Pain(1)	2	6.67	10	33.33		
No Pain(0)	0	0	14	46.67		

(* **P<0.0001)

Table-4 shows the frequency and percentage distribution of pre and post interventional level of Episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group II. During pretest, majority of the postnatal mothers, 14 (46.67%) had both moderate and severe pain, 2 (6.67%) had mild pain, whereas during posttest, majority of the postnatal mothers 14 (46.67%) had no pain, 10 (33.33%) had pain and 6(20%) had moderate pain. The Chi square value was 26.67, P value was 0.000008 which was significant at level of P<0.0001. Hence it shows that there was a significant difference in level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group II.

Section IV

Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy wound healing scores among postnatal mothers undergone normal vaginal delivery in Experimental group I and II

Testing of hypothesis

H_1: There will be a significant difference between the pre and post interventional level of Episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table 5: Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy wound healing scores among postnatal mothers undergone normal vaginal delivery in Experimental group I. (n= 30)

Episiotomy Wound Healing	Experimental group I				χ^2	P Value
	Pre test		Post test			
	f	%	f	%		
No infection (0)	0	0	5	16.67	10.08	df =3 0.012 *
Mild infection (1-5)	10	33.33	5	16.67		
Moderate infection (6-10)	16	53.33	20	66.67		
Severe infection (11-15)	4	13.33	0	0		

(*P<0.05)

Table-5 shows the frequency and percentage distribution of pre and post interventional level of Episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group I. During pretest, majority of the postnatal mothers, 16 (53.33%) had moderate infection, 4(13.33%) had severe infection and 10 (33.33%) had mild infection, whereas during posttest, majority of the postnatal mothers 20 (66.67%) had moderate infection, 5 (16.67%) had mild and no infection. The Chi square value was 10.08, P value was 0.012 which was significant at level of P<0.05. It shows that there was a significant difference in level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I.

Table 6: Data pertaining to frequency and percentage distribution of pre and post interventional level of episiotomy wound healing scores among postnatal mothers undergone normal vaginal delivery in experimental group II. (n=30)

Episiotomy Wound Healing	Experimental group II				χ^2	P Value
	Pre test		Post test			
	f	%	f	%		
No infection (0)	0	0	8	26.67	15.6	df =3 0.0013 **
Mild infection (1-5)	12	40	15	50		
Moderate infection (6-10)	14	46.67	7	23.33		
Severe infection (11-15)	4	13.33	0	0		

(P<0.01)**

Table-6 shows the frequency and percentage distribution of pre and post interventional level of Episiotomy pain scores among postnatal mothers undergone normal vaginal delivery in Experimental group II. During pretest, majority of the postnatal mothers, 14 (46.67%) had moderate infection, 12 (40%) had mild infection and 4 (13.33%) had severe infection, whereas during posttest, majority of postnatal mothers 15 (50%) had mild infection, 8 (26.67%) had no infection and 7 (23.33%) had moderate infection. The Chi square value was 15.6, P value was 0.0013 which was significant at level of P<0.01. Hence it shows that there was a significant difference in level of episiotomy wound healing among postnatal mothers in Experimental group II.

Hence from the table 3,4,5,6 it was clear that the research hypothesis H_1 was accepted.

Section V

Data pertaining to the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Testing of hypothesis

H_2: There will be a significant difference between post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table 7: Data pertaining to the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II. (N=60)

Episiotomy Pain Score	Post test score				χ^2	P Value
	Experimental group I		Experimental group II			
	f	%	f	%		
Severe Pain (3)	0	0	0	0	17.143	df =3 0.0006 ***
Moderate Pain(2)	12	40	6	20		
Mild Pain(1)	15	50	10	33.33		
No Pain(0)	3	10	14	46.67		

(*P<0.0001)**

Table-7 shows that there was difference between Povidone Iodine Sitzbath and Lavender Oil Sitzbath, which was used as a intervention on episiotomy pain in both Experimental groups, the Chi square value was 17.143, and P value was 0.0006 which is significant at level of P<0.0001. Hence it was evident that there was significant difference between Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain among postnatal mother's undergone normal vaginal delivery in Experimental group I and II.

Section VI

Data pertaining to the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II

Testing of hypothesis

H_2: There will be a significant difference between post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table 8: Data pertaining to the effectiveness of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II. (N=60)

Episiotomy wound healing	Experimental group				χ^2	P Value
	I		II			
	Post test		Post test			
	f	%	f	%		
No infection (0)	5	16.67	8	26.67	31.93	df =3 0.000021 ***
Mild infection (1-5)	5	16.67	15	50		
Moderate infection (6-10)	20	66.67	7	23.33		
Severe infection (11-15)	0	0	0	0		

(*P<0.0001)**

Table-8 shows that there was difference between Povidone Iodine Sitzbath and Lavender Oil Sitzbath, which was used as a intervention on episiotomy wound healing in both Experimental groups, the Chi square value was 31.93, and the P value was 0.000021 which was significant at the level of P<0.0001. Hence it is evident that there was significant difference between Povidone Iodine Sitzbath and Lavender Oil Sitzbath on

episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Section VII

Data pertaining to comparison of post interventional level of pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Testing of hypothesis

H_2: There will be a significant difference between post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table 9: Data pertaining to comparison of post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II. (N=60)

Variable	Post test		Unpaired t test	df	P Value
	Mean	SD			
Povidone Iodine Sitzbath	1.1	0.83	2.9210	58	0.0050 *
Lavender oil Sitzbath	1.766	0.918			

(*P<0.05)

Table 9 depicts that while comparing the post interventional level of episiotomy pain among mothers undergone normal vaginal delivery in Experimental group I and II, the mean value for Experimental Group I (Povidone Iodine Sitzbath) was 1.1 and the Standard Deviation was 0.83. The mean value for Experimental group II (Lavender Oil Sitzbath) was 1.766 and the Standard deviation was 0.918. The un-paired t test value was 2.9210 which was more than the table value, P value was 0.005 which indicates that it was statistically significant.

Section VIII

Data pertaining to comparison of post interventional level of episiotomy wound healing scores among postnatal mothers in Experimental group I and II.

Testing of hypothesis

H_2: There will be a significant difference between post interventional level of episiotomy wound healing scores among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

Table-10: Data pertaining to comparison of post interventional assessment of episiotomy wound healing among postnatal mothers in Experimental group I and II.

(N=60)

Variable	Post test		Unpaired t test	df	P Value
	Mean	SD			
Povidone Iodine Sitzbath	3	2.66	4.73	58	0.02 *
Lavender oil Sitzbath	4.73	3.28			

(*P<0.05)

Table 10 shows that while comparing the post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in experimental group I and II, mean value for Experimental Group I (Povidone Iodine Sitzbath) was 3 and Standard Deviation was 2.66. The mean value for Experimental group II (Lavender Oil Sitzbath) was 4.73 and Standard deviation was 3.28. The un-paired t test value was 4.73, which was more than the table value, P value was 0.02 which indicates that it was statistically significant.

Hence from the table 7, 8 it was clear that Lavender Oil Sitzbath was found effective on reducing episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery. Hence, the research hypothesis H_2 was accepted.

Section IX

Data pertaining to association between post interventional level of episiotomy pain and selected demographic and clinical variables in Experimental group I and II.

Testing of hypothesis

H_3: There will be a significant association between post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

Table 11: Data pertaining to association between post interventional level of pain and selected demographic and clinical variables in Experimental group I. (N=30)

Sl. No	Demographic and clinical Variables	Experimental group I				Chi Square	P value
		Level of Episiotomy pain					
		No pain	Mild Pain	Moderate pain	Severe Pain		
1.	**Age (in years)**						
	a) ≤20	1	1	0	0		df=6
	b) 21-25	1	5	2	0	11.11	0.08
	c) 26-30	1	7	3	0		
	d) ≥30	0	2	7	0		
2.	**Education**						
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	0	0		
	c) Middle school certificate	0	3	2	0		
	d) High school certificate	1	5	4	0	4.011	df=8
	e) Post high school diploma	0	4	3	0		0.856
	f) Graduate or post graduate	1	2	1	0		
	g) Professional or Honours	1	1	2	0		
	h) Others	0	0	0	0		
3.	**Occupation**						
	a) Profession	2	2	0	0		
	b) Semi profession	0	0	0	0		
	c) Shop owners	0	0	0	0	17.25	df=8
	d) Skilled worker	1	3	0	0		0.02
	e) Semiskilled worker	0	4	2	0		*
	f) Unskilled worker	0	4	4	0		
	g) Unemployed	0	2	6	0		

4.	**Family monthly income**						
	a) >25000	1	2	0	0		
	b) 20000- 24999	2	4	2	0		
	c) 15000-19999	0	6	2	0	14.786	df=8
	d) 10000-14999	0	3	4	0		0.06
	e) 5000-9999	0	0	4	0		
	f) <5000	0	0	0	0		
5.	**Type of family**						
	a) Nuclear	3	15	7	0		
	b) Joint	0	0	2	0	9	df=4
	c) Broken family	0	0	0	0		0.06
	d) Extended family	0	0	3	0		
6.	**Religion**						
	a) Hindu	2	8	5	0		
	b) Muslim	0	2	0	0	3.405	df=4
	c) Christian	1	5	7	0		0.496
	d) Others	0	0	0	0		
7.	**Area of residence**						
	a) Rural	1	9	12	0		
	b) Semirural	0	0	0	0	8.182	df=2
	c) Urban	2	6	0	0		0.016
	d) Semi urban	0	0	0	0		*
8.	**Dietary pattern**						df=4
	a) Vegetarian	1	1	1	0	22.61	0.0001
	b) Non-vegetarian	2	14	11	0		***
9.	**Parity**						
	a) One	2	2	0	0		
	b) Two	1	10	10	0	9.505	df=4
	c) Three	0	3	2	0		0.04
	d) Above three	0	0	0	0		*

(*P<0.05, ** P<0.01, ** *P<0.001)

Table 11 shows that there was a significant association between post interventional level of Episiotomy pain and selected demographic and clinical variable like Occupation (0.02*), Area of Residence (0.016*), Dietary pattern (0.0001*) and Parity (0.04*). There was no significant association between post interventional level of pain and selected other demographic variables. Hence research hypothesis H_3 was partially accepted in experimental group I.

Table 12: Data pertaining to association between post interventional level of Episiotomy pain scores and selected demographic and clinical variables in Experimental group II. (N=30)

S.No	Demographic and clinical Variables	Experimental group II				Chi Square	P value
		Level of Episiotomy pain					
		No Pain	Mild pain	Moderate Pain	Severe Pain		
1.	**Age (in years)**						
	a) ≤20	1	0	0	0		
	b) 21-25	7	1	0	0	12.65	df=6
	c) 26-30	4	4	5	0		0.04
	d) ≥30	2	5	1	0		*
2.	**Education**						
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	0	0		
	c) Middle school certificate	1	2	1	0		
	d) High school certificate	4	4	3	0	3.67	df=8
	e) Post high school diploma	3	1	1	0		0.885
	f) Graduate or post graduate	4	2	0	0		
	g) Professional or Honours	2	1	1	0		
	h) Others	0	0	0	0		
3.	**Occupation**						
	a)Profession	0	2	2	0		
	b) Semi profession	0	0	0	0		
	c)Shop owners	0	0	0	0		
	d) Skilled worker	7	1	0	0	23.90	df=8
	e)Semiskilled worker	4	1	0	0		0.002
	f) Unskilled worker	3	4	0	0		**
	g) Unemployed	0	2	4	0		
4.	**Family monthly income**						
	a) >25000	0	0	2	0		
	b) 20000- 24999	2	3	1	0		
	c) 15000-19999	4	2	3	0		
	d) 10000-14999	4	4	0	0	14.64	df=8
	e) 5000-9999	4	1	0	0		0.06
	f) <5000	0	0	0	0		

5.	**Type of family**						
	a)Nuclear	11	9	4	0		
	b) Joint	2	1	0	0	5.5	df=4
	c)Broken family	0	0	0	0		0.23
	d) Extended family	1	0	2	0		
6.	**Religion**						
	a) Hindu	8	4	1	0		
	b) Muslim	0	0	2	0	9.96	df=4
	c) Christian	6	6	3	0		0.04
	d) Others	0	0	0	0		*
7.	**Area of residence**						
	a) Rural	12	9	2	0		
	b) Semirural	0	0	0	0	8.106	df=2
	c) Urban	2	1	4	0		0.017
	d) Semi urban	0	0	0	0		*
8.	**Dietary pattern**						df=2
	a) Vegetarian	0	4	0	0	9.231	0.009
	b) Non-vegetarian	14	6	6	0		**
9.	**Parity**						
	a) One	5	0	0	0		df=4
	b) Two	9	10	1	0	29.64	0.000
	c) Three	0	0	5	0		005
	d) Above three	0	0	0	0		***

(*P<0.05, ** P<0.01, ** *P<0.001)

Table 12 table shows that there was a significant association between post interventional level of pain and selected demographic and clinical variable such as Age (0.04*), Occupation (0.002**), Religion (0.04*), (0.06*) and Type of family, Education, Area of Residence (0.017*), Dietary pattern (0.009**) and Parity (0.000005***). There was no significant association between post interventional level of episiotomy pain and selected demographic variable such as Educational status, Family monthly income and Type of family. Hence the research hypothesis H_3 was accepted in experimental group II.

Section X

Data pertaining to association between posttest wound healing scores and selected demographic and clinical variables in Experimental group I and II.

Testing of hypothesis

H_3: There will be a significant association between post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

Table 13: Data pertaining to association between post interventional level of wound healing and selected demographic and clinical variables in experimental group I. (n=30)

Sl No.	Demographic and clinical Variables	Experimental group I				Chi Square	P value
		Level of Episiotomy wound healing					
		No Infection	Mild Infection	Moderate Infection	Severe Infection		
1.	**Age (in years)**						
	a) ≤20	0	0	2	0	6.402	df=6
	b) 21-25	1	1	6	0		0.37
	c) 26-30	2	4	5	0		
	d) ≥30	2	0	7	0		
2.	**Education**						
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	0	0	6.236	df=6
	c) Middle school certificate	2	0	3	0		0.62
	d) High school certificate	2	2	6	0		
	e) Post high school diploma	0	2	5	0		
	f) Graduate or postgraduate	1	0	3	0		
	g) Professional or Honours	0	1	3	0		
	h) Others	0	0	0	0		
3.	**Occupation**						
	a) Profession	0	1	3	0		
	b) Semi profession	0	0	0	0		
	c) Shop owners	0	0	0	0	5.563	df=8
	d) Skilled worker	1	1	2	0		0.62
	e) Semi skilled worker	0		4	0		
	f) Unskilled worker	2	0	6	0		
	g) Unemployed	2	1	5	0		

4.	**Family monthly income**						
	a) >25000	2	1	0	0		
	b) 20000- 24999	0	2	6	0		
	c) 15000-19999	1	2	6	0	11.66	df=8
	d) 10000-14999	2	0	5	0		0.16
	e) 5000-9999	0	1	3	0		6
	f) <5000	0	0	0	0		
5.	**Type of family**						
	a) Nuclear	2	3	20	0		df=4
	b) Joint	1	1	0	0	13.12	0.01
	c) Broken family	0	0	0	0		4
	d) Extended family	2	1	0	0		*
6.	**Religion**						
	a) Hindu	3	4	18	0		
	b) Muslim	0	0	0	0	3.246	df=4
	c) Christian	2	1	2	0		0.51
	d) Others	0	0	0	0		
7.	**Area of residence**						
	a) Rural	2	2	18	0		df=2
	b) Semi rural	0	0	0	0	8.523	0.01
	c) Urban	3	3	2	0		4
	d) Semi urban	0	0	0	0		*
8.	**Dietary pattern**						df=2
	a) Vegetarian	2	1	1	0	7.778	0.02
	b) Non-vegetarian	3	4	20	0		*
9.	**Parity**						
	a) One	3	1	0	0		df=4
	b) Two	1	2	18	0	16.77	0.00
	c) Three	1	1	2	0	1	2
	d) Above three	0	0	0	0		**

(*P<0.05, **P<0.01, ** *P<0.001)

Table 13 shows that there was a significant association between the post interventional level of Episiotomy wound healing and selected demographic and clinical variable such as Type of family(0.014), Area of Residence (0.014*), Dietary pattern (0.02*) and Parity (0.002**). There was no significant association between the post interventional level of episiotomy pain and selected demographic variable such as Age, Educational status, Occupation, Family monthly income and Religion. Hence the research hypothesis H_3 was accepted in Experimental group II.

Table 14: Data pertaining to association between post interventional level of wound healing scores and selected demographic and clinical variables in Experimental group II. (n=30)

Sl N	Demographic and clinical Variables	Experimental group II				Chi Square	P value
		Level of Episiotomy wound healing					
		No Infection	Mild Infection	Moderate Infection	Severe Infection		
1.	**Age (in years)**						
	a) ≤20	1	0	0	0		df=6
	b) 21-25	6	2	0	0		0.005
	c) 26-30	1	8	4	0	18.10	**
	d) ≥30	0	5	3	0		
2.	**Education**						
	a) Illiterate	0	0	0	0		
	b) Primary school certificate	0	0	0	0		
	c) Middle school certificate	1	1	2	0		
	d) High school certificate	0	10	1	0	25.842	df=8
	e) Post high school diploma	1	0	4	0		0.001
	f) Graduate or post graduate	4	2	0	0		**
	g) Professional or Honours	2	2	0	0		
	h) Others	0	0	0	0		
3.	**Occupation**						
	a) Profession	3	1	0	0		
	b) Semi profession	0	0	0	0		
	c) Shop owners	0	0	0	0	15.588	df=8
	d) Skilled worker	2	6	2	0		0.004
	e) Semi skilled worker	2	2	1	0		**
	f) Unskilled worker	1	4	0	0		
	g) Unemployed	0	2	4	0		
4.	**Family monthly income**						
	a) >25000	2	0	0	0		
	b) 20000- 24999	3	3	0	0		
	c) 15000-19999	3	2	4	0	19.454	df=8
	d) 10000-14999	0	5	3	0		0.012
	e) 5000-9999	0	5	0	0		*
	f) <5000	0	0	0	0		
5.	**Type of family**						
	a. Nuclear	3	14	7	0		
	b. Joint	2	1	0	0	19.454	df=8
	c. Broken family	0	0	0	0		0.012
	d. Extended family	3	0	0	0		*

6.	**Religion**						
	a) Hindu	4	6	3	0		
	b) Muslim	0	0	2	0	10.40	df=4
	c) Christian	4	8	1	0		0.03
	d) Others	0	10	0	0		*
7.	**Area of residence**						
	a) Rural	6	15	2	0		df=4
	b) Semirural	0	0	0	0	25.10	0.000
	c) Urban	2	0	5	0		04
	d) Semi urban	0	0	0	0		***
8.	**Dietary pattern**						df=4
	a) Vegetarian	0	2	2	0	25.109	0.0004
	b) Non-vegetarian	8	13	5	0		***
9.	**Parity**						
	a) One	4	1	0	0		df=4
	b) Two	2	14	4	0	16.893	0.002
	c) Three	3	0	3	0		**
	d) Above three	0	0	0	0		

(*P<0.05, **P<0.01, ** *P<0.001)

Table 14 shows that there was a significant association between the post interventional level of Episiotomy wound healing and selected demographic and clinical variable such as Age (0.005**), Education (0.001**), Occupation (0.004**), Family monthly income (0.012*), Type of family (0.012*), Religion (0.03*), Area of Residence (0.00004***), Dietary pattern (0.0004***) and Parity (0.002**).

Table 11, 12, 13, 14 shows that there was a significant association between post interventional level of Episiotomy Pain and wound healing scores and selected demographic and clinical variables in experimental group I and II. Hence research hypothesis H_3 was accepted.

SUMMARY

This chapter dealt with analysis and interpretation of data obtained by the researcher. The analysis of the result showed that the level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in the experimental group II has reduced by administering Lavender Oil Sitzbath when compared to experimental groupI by administering Povidone Iodine Sitzbath.

CHAPTER V

DISCUSSION

This chapter deals with the discussion of the data analyzed based on the objectives and Hypothesis of the study. The problem stated was ”**A comparative study to assess the effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district”**. The discussion was based on the objectives of the study and hypothesis mentioned in the study.

OBJECTIVES OF THE STUDY

- To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To assess the effectiveness by comparing the post interventional level of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected demographic and clinical variables.

DEMOGRAPHIC AND CLINICAL VARIABLES OF EXPERIMENTAL GROUP I AND II AMONG THE POST NATAL MOTHERS UNDERGONE NORMAL VAGINAL DELIVERY

With regard to Age in Experimental group I and II, majority of Postnatal mothers, 11(36.66%) and 13 (43.33%) falls between age group of 26-30 years, 9(30%) and 8(26.66%) were between the age group of>30 years. 8((26.66%) were between the age group of 21-25 years. Also a least proportion of 2(6.67%) and 1(3.33%) were between the age group ≤20 years.

With regard to Educational status in Experimental group I, majority of Postnatal mothers 10(33.33%) had high school certificate, 7(23.33%) undergone post high school

diploma course, 5(16.66%) acquired middle school certificate, and minimum number of graduates and professionals were found in proportion of 4(13.33%). In experimental group II, majority of 11(36.66%) acquired high school certificates, 6(20%) were graduates, 5(16.66%) completed post high school diploma, and minimum number of 4(13.3%) acquired middle school and professionals.

With regard to Occupational status in Experimental group I, a proportion of Postnatal mothers 8(26.67%) were unskilled workers and unemployed, 7(23.33%) were semiskilled workers, skilled workers and professionals were 4(13.3%) and 3(10%) respectively. In experimental group II 9(30%) were unskilled worker,8(26.67%) were skilled worker, 6(20%) were unemployed, 5(16.66%) were semiskilled workers, minimum number of professionals were 2(6.67%).

With regard to Family monthly income, majority of Postnatal mothers 8 (26.67%) had an income between Rs.20000-24999and Rs 15000-19999 in Experimental group I, majority of 9 (30%) had an income between Rs.15000-19999in Experimental group II, 6 (20%) had an income between Rs. 20000-24999in Experimental group II. In Experimental group I and II, 7 (23.33%) and 8 (26.67%) had an income between Rs. 10000-14999,4 (13.33%) and 5 (16.66%) had an income between Rs.5000-9999,3 (10%) and 2 (6.67%)had income >Rs.25000in both Experimental group I and II.

With regard to Type of family in both Experimental group I and II, majority of Postnatal mothers 25(83.33%) and 24(80%) were from Nuclear family in both Experimental group I and II, 3 (10%) were from Extended family, 2(6.67%) and 3(10%) were from Joint family.

With regard to Religious status, majority of Postnatal mothers 15(50%) were Hindus, 13(43.33%) were Christians in Experimental group I, where as in Experimental group II Christians hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Comparatively among both the groups Muslims were found limited in number of 2(6.67%).

With regard to the Area of residence in Experimental group I and II, majority of Postnatal mothers were from rural background of 22(73.33%) and 23(76.67%) respectively. Also a least proportion of 8(26.67%) and 7(23.33%) were from urban background.

With regard to Dietary pattern in Experimental group I and II, majority of Postnatal mothers 27(90%) and 26(86.66%) were Non-vegetarian. Comparatively vegetarian hold the least proportion of 3(10%) and 4(13.33%) in both groups.

With regard to Parity in Experimental group I and II, majority of Postnatal mothers 21(70%) and 20(26.66%) had Second Parity; where as in both groups 5(16.67%) had Third Parity. Comparatively postnatal mothers hold the least proportion of 4(13.33%) and 5(16.66%) had first Parity.

Objectives -1

To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

With regard to pre-interventional level of episiotomy pain score in Experimental group I, majority of the postnatal mothers, 16 (53.33%) had moderate pain, 12(40%) had severe pain and 2 (6.67%) had mild pain. In Experimental group II, majority of the postnatal mothers 14(46 .67%) had both moderate and severe pain, 2(6.67%) had mild pain.

With regard to post interventional level of episiotomy pain score in Experimental group I, majority of the postnatal mothers 15 (50%) had mild pain, 12 (40%) had moderate pain and 3(10%) had no pain. In Experimental group II, majority of the postnatal mothers 18(60%) had no pain, 8 (26.67%) had moderate pain and 4(13.33%) had mild pain.

With regard to pretest episiotomy wound healing score in both Experimental group I and II, All the postnatal mothers, 30 (100%) had moderate infection.

With regard to post interventional level of episiotomy wound healing score in Experimental group I, majority of the postnatal mothers, 23 (76.67%) had moderate infection and 7 (23.33%) had mild infection. In Experimental group II, majority of the postnatal mothers 25(83.33%) had moderate infection and 5(16.67%) had mild infection.

Objectives -2

To assess the effectiveness by comparing the post interventional level of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in experimental group I and II.

By comparing the post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery in Experimental group I and II, the mean value for Experimental Group I (Povidone Iodine Sitzbath) was 1.1 and the Standard Deviation was 0.83. The mean value for Experimental group II (Lavender Oil Sitzbath) was 1.766 and the Standard deviation was 0.918. The Un-paired t test value was (2.9210), degree of freedom was 58 and the P value was 0.005which indicates that it is statistically significant.

By comparing the post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II, the mean value for Experimental Group I (Povidone Iodine Sitzbath) was 3 and the Standard Deviation were 2.66. The mean value for Experimental group II (Lavender Oil Sitzbath) was 4.73and the Standard deviation was3.28. The Un-paired t test value was (4.73), degree of freedom was 58 and the P value was 0.02which indicates that it is statistically significant. Hence, the research hypothesis (H_2) was accepted.

Objectives-3

To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

In Experimental group I, there was a significant association between the post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery and selected demographic and clinical variable such as Occupation, Area of Residence, Dietary pattern and Parity at P value< 0.05. There was no significant association between level of episiotomy pain and selected demographic variable such as Age, Educational status, Religion, Family monthly income and Type of family.

In Experimental group II, there was a significant association between the post interventional level of episiotomy pain among postnatal mothers undergone normal

vaginal delivery and selected demographic and clinical variable such as Age, Occupation, and Religion, Area of Residence, Dietary pattern and Parity at P value < 0.05. There was no significant association between level of pain and selected demographic variable such as Educational status, Family monthly income and Type of family.

In Experimental group I, there was a significant association between the post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery and selected demographic and clinical variable such as Age, Type of family, Area of Residence, Dietary pattern and Parity at P value< 0.05. There was no significant association between level of pain and selected demographic variable such as Educational status, Occupation, Family monthly income and Religion.

In Experimental group II, there was a significant association between the post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery and selected demographic and clinical variable such as Age, Educational status, Occupation, Religion, Area of Residence, Dietary pattern and Parity at P value< 0.05. There is no significant association between level of pain and selected demographic variable such as Educational status, Family monthly income and Type of family.

It was revealed that there was a significant association between post interventional level of Episiotomy pain and wound healing score among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables of among postnatal mothers in Experimental group I and II. The hypothesis H_3 was accepted. Hence it was concluded that there was significant association between post interventional level of Episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery and selected demographic and clinical variables.

SUMMARY

This chapter dealt with the major findings of the demographic and clinical variables of Postnatal mothers, description of post interventional Level of episiotomy pain and wound healing with and without Povidone Iodine Sitzbath and Lavender Oil, effectiveness by comparing the level of pain and wound healing between both groups, association between the post interventional level of Episiotomy pain and wound healing among postnatal mothers with selected demographic and clinical variables.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

This chapter deals with the summary of the study and the conclusion drawn , findings, conclusion drawn, nursing implications of the study for different areas like nursing practice, nursing education, nursing administration and nursing research and also includes the recommendation for future research in the field.

SUMMARY

The summary includes the, objectives of the study, description of procedure used, major findings and conclusion and recommendations for further research study.**"A comparative study to assess the effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in selected hospitals at Kanyakumari district."**

THE OBJECTIVES OF THE STUDY

- To assess the level of episiotomy pain and wound healing before and after administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To assess the effectiveness by comparing the post interventional level of Povidone Iodine Sitzbath and Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.
- To associate the post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

HYPOTHESES

H_1: There will be a significant difference between the pre and post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_2: There will be a significant difference between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II.

H_3: There will be a significant association between post interventional level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables.

The **conceptual framework** adopted for this study is based **on the Ludwig's General System Theory (1968)**. It consists of five concepts such as input, process, output, feedback and environment. This study intends to evaluate effectiveness of Povidone-Iodine Sitzbath versus Lavender Oil Sitzbath on episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

The investigator organized the **Review of literature** under the following headings

1. Reviews related to episiotomy
2. Reviews related to selected pain reduction and wound care strategies on episiotomy pain and wound healing
3. Reviews related to effectiveness of Povidone Iodine Sitzbath on episiotomy pain and wound healing
4. Reviews related to effectiveness of Lavender Oil Sitzbath on episiotomy pain and wound healing.

In the **methodology** the investigator selected a non-probability convenient sampling technique.

The variables in the study are as follows

Independent variable

- Povidone-Iodine Sitzbath and
- Lavender Oil Sitzbath

Dependent variable

In this study, the dependent variable is episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

A Quasi Experimental Research Design, Pre-test Post-test only Design was chosen for this study. The non-probability convenient sampling technique was used as sampling technique. Subjects were selected based upon the inclusion and exclusion criteria.60 subjects were selected for the study .The non-probability convenient sampling technique was adopted to select 60 samples for both Experimental group I and II.

The **Tool** used to collect the data consisted of three parts,

Tool I consisted of Demographic and clinical variables with age, education, occupation, family monthly income, type of family, religion, place of living, dietary pattern, parity.

Tool II: Verbal Descriptive Pain Scale (Jack Harich, 2002) to assess the Level of episiotomy pain among postnatal mothers undergone normal vaginal delivery.

Tool III: REEDA Scale (Nancy Davidson's 1972)is a scientific tool to assess the Level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery.

Content validity was established by 10 experts in the field like eight obstetrics and gynecology nursing personnel, one gynecologist and one statistician. Reliability of the tool was calculated by Karl Pearson coefficient formula method. In this study the reliability of the tool was 0.9.

Pilot study was conducted in the month of November for a period of one week in Annammal hospital, kuzhithurai. 6 postnatal mothers were selected. Samples were selected based on the inclusion and exclusion criteria. Structured questionnaire was given to the patients to obtain demographic and clinical data. Then the Participants Povidone Iodine Sitzbath were administered to 3 postnatal mothers and other three of them were administered Lavender Oil Sitzbath both morning and evening for five days. After the administration of Povidone Iodine Sitzbath and Lavender Oil Sitzbath post test was done by using Verbal Descriptive Pain Scale and REEDA Scale to assess the Level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery.

Main study data collection was done for 4 weeks in Annammal hospital, Kuzhithurai PPK hospital, Marthandam and Rathna hospital Swamiarmadam on the month of December. The sample of 60 postnatal mothers was selected. The pre interventional test was done on first postnatal day by using Verbal Descriptive Pain Assessment Scale and REEDA Scale. Povidone Iodine Sitzbath was administered to experimental group I and Lavender Oil Sitzbath was administered to experimental group II for period of 20 mins for five consecutive days in morning and evening for five days. The post interventional level of episiotomy pain and wound healing was evaluated on fifth postnatal day for both experimental groups with Verbal Descriptive Pain Assessment Scale and REEDA Scale.

Collected data was analyzed by using the descriptive statistics (mean, standard deviation, frequency and percentage) and inferential statistics (unpaired t- test, chi-square) and results were calculated.

FINDINGS

Major findings of the study are presented under the followings

1. FINDINGS RELATED TO DEMOGRAPHIC AND CLINICAL VARIABLES OF POSTNATAL MOTHER

With regard to Age in experimental group I and II, majority of postnatal mothers 11(36.66%) and 13 (43.33%) falls between age group of 26-30 years, 9(30%) and 8(26.66%) were between the age group more than >30 years. 8((26.66%) were between the age group of 21-25 years. Also a least proportion of 2(6.67%) and 1(3.33%) were between the age group of ≤ 20 years.

With regard to Educational status in experimental group I, majority of postnatal mothers 10(33.33%) had high school certificate, 7(23.33%) undergone post high school diploma course, 5(16.66%) acquired middle school certificate, and minimum number of graduates and professionals were found in proportion of 4(13.33%). In experimental group II, majority of 11(36.66%) acquired high school certificates, 6(20%) were graduates, 5(16.66%) completed post high school diploma, and minimum number of 4(13.3%) acquired middle school and professionals.

With regard to Occupational status in experimental group I, a proportion of postnatal mothers 8(26.67%) were unskilled workers and unemployed, 7(23.33%) were

semiskilled workers, skilled workers and professionals were 4(13.3%) and 3(10%) respectively. In experimental group II, 9(30%) were unskilled worker, 8(26.67%) were skilled worker, 6(20%) were unemployed, 5(16.66%) were semiskilled workers, minimum number of professionals were found in proportion of 2(6.67%).

With regard to Family monthly income, majority of postnatal mothers 8 (26.67%) had an income between Rs.20000 - 24999and Rs 15000 - 19999 in experimental group I, majority of 9 (30%) had an income between Rs.15000 - 19999in experimental group II, 6 (20%) had an income between Rs.20000 - 24999in experimental group II. In experimental group I and II, 7 (23.33%) and 8 (26.67%) had an income between Rs.10000 - 14999in both experimental group I and II, 6 (20%) had an income between Rs.20000 - 24999in experimental group II, 4 (13.33%) and 5 (16.66%) had an income between Rs.5000 - 9999in both experimental group I and II, 3 (10%) and 2 (6.67%) had an income ≥ Rs.25000 in both experimental group I and II.

With regard to Type of family in experimental group I and II, majority of postnatal mothers 25(83.33%) and 24(80%) were from Nuclear family, 3 (10%) were from Extended family, 2(6.67%) and 3(10%) were from Joint family.

With regard to Religious status, majority of postnatal mothers 15(50%) were Hindus, 13(43.33%) were Christians in experimental group I, where as in experimental group II Christians hold the leading proportion of 15(50%), next Hindus with 13(43.33%). Muslims were found limited in number of 2(6.67%).

Regarding the Area of residence, majority of postnatal mothers in experimental group I and II were from rural background of 22(73.33%) and 23(76.67%) respectively. Also a least proportion of 8(26.67%) and 7(23.33%) were from urban background.

With regard to Dietary pattern in experimental group I and II, majority of postnatal mothers 27(90%) and 26(86.66%) were Non-vegetarian. Comparatively vegetarian hold the least proportion of 3(10%) and 4(13.33%) in both the groups.

With regard to Parity in experimental group I and II, majority of postnatal mothers 21(70%) and 20(26.66%) had Second Parity, where as in both groups 5(16.67%) had Third Parity. Comparatively postnatal mothers hold the least proportion of 4(13.33%) and 5(16.66%) had first Parity.

2. FINDINGS RELATED TO THE LEVEL OF EPISIOTOMY PAIN AND WOUND HEALING BEFORE AND AFTER ADMINISTRATION OF POVIDONE IODINE SITZBATH AND LAVENDER OIL SITZBATH AMONG POSTNATAL MOTHERS UNDERGONE NORMAL VAGINAL DELIVERY

With regard to pretest episiotomy pain score in Experimental group I, majority of the postnatal mothers, 16 (53.33%) had moderate pain, 12(40%) had severe pain and 2 (6.67%) had mild pain. In Experimental group II, majority of the postnatal mothers 14(46 .67%) had both moderate and severe pain, 2(6.67%) had mild pain.

With regard to posttest episiotomy pain score in Experimental group I, majority of the postnatal mothers 15 (50%) had mild pain, 12 (40%) had moderate pain and 3(10%) had no pain. In Experimental group II, majority of the postnatal mothers 18(60%) had no pain, 8 (26.67%) had moderate pain and 4(13.33%) had mild pain.

With regard to pretest episiotomy wound healing score in both Experimental group I and II, All the postnatal mothers, 30 (100%) had moderate infection.

With regard to posttest episiotomy wound healing score in Experimental group I, majority of the postnatal mothers, 23 (76.67%) had moderate infection and 7 (23.33%) had mild infection. In Experimental group II, majority of the postnatal mothers 25(83.33%) had moderate infection and 5(16.67%) had mild infection

3. FINDINGS RELATED TO THE EFFECTIVENESS BY COMPARING THE POST INTERVENTIONAL LEVEL OF EPISIOTOMY PAIN AND WOUND HEALING AMONG POSTNATAL MOTHERS IN BOTH EXPERIMENTAL GROUP I AND II

It reveals that in Experimental group I the post interventional level of episiotomy pain among postnatal mothers undergone normal vaginal delivery, the mean value for Experimental Group I (Povidone Iodine Sitzbath) was 1.1 and the Standard Deviation was 0.83. The mean value for Experimental group II (Lavender Oil Sitzbath) was 1.766 and the Standard deviation was 0.918. The Un-paired t test value was (2.9210), degree of freedom was 58 and the P value was 0.005which indicates that it is statistically significant.

By comparing the post interventional level of episiotomy wound healing among postnatal mothers undergone normal vaginal delivery in Experimental group I and II,

mean value for Experimental Group I (Povidone Iodine Sitzbath) was 3 and Standard Deviation was 2.66. The mean value for Experimental group II (Lavender Oil Sitzbath) was 4.73and Standard deviation was3.28. The Un-paired t test value was (4.73), degree of freedom was 58 and P value was 0.02which indicates that it was statistically significant. Hence, research hypothesis (H_2) was accepted.

4. FINDINGS RELATED TO ASSOCIATION BETWEEN POST INTERVENTIONAL LEVEL OF EPISIOTOMY PAIN AND WOUND HEALING AMONG POSTNATAL MOTHERS UNDERGONE NORMAL VAGINAL DELIVERY AND SELECTED DEMOGRAPHIC AND CLINICAL VARIABLES IN EXPERIMENTAL GROUP I AND II

There was a significant association between post interventional level of Episiotomy pain and wound healing score among postnatal mothers undergone normal vaginal delivery with selected demographic and clinical variables of among postnatal mothers in Experimental group I and II. The hypothesis H_3 was accepted.

Hence research hypothesis H_3 stated that, there was a significant association between post interventional Level of episiotomy pain and wound healing among postnatal mothers undergone normal vaginal delivery and selected demographic and clinical variables.

CONCLUSION

The main conclusion of the study was Lavender Oil Sitzbath is effective in reducing episiotomy pain and promoting wound healing among postnatal mothers undergone normal vaginal delivery which is denoted by significant reduction in level of pain and wound healing. The selected postnatal mothers became familiar and found themselves comfortable and also expressed satisfaction. From the results of the study, it concluded that Lavender Oil Sitzbath is easy to apply. The nurses can include the Lavender Oil Sitzbath in their routine activities to reduce the episiotomy related pain and wound healing.

IMPLICATIONS OF THE STUDY

Based on the findings the researcher recommended the implications on Nursing practice, Nursing administration, Nursing education and Nursing research.

Nursing Practice

- The findings of the study revealed that Lavender Oil Sitzbath can be included for nursing management during puerperium.
- Lavender Oil Sitzbath are considered as complimentary therapy and can be imparted to nursing students to improve skill in providing care and update their knowledge on evidence based practice.
- In service education can be provided by the nursing personnel to help mothers to gain comfort during puerperium.
- Nurses are in best position to impart Lavender Oil Sitzbath to mothers in episiotomy pain.
- Nurses play an important role in primary health care by early detection and prevention of delayed wound healing.

Nursing Administration

- The Nurse administrators can initiate Lavender Oil Sitzbath to reduce the pain and promote wound healing through development programmes like in-service education and continuing nursing education programme.
- This enables the nurse to update the knowledge and to render the effective care to the public.
- The nurse administrators can train the nurses to identify level of pain and wound healing, to give counseling and teaching regarding management of pain and wound healing during puerperium.
- Nurse administrators can prepare written policies and protocols regarding care of mothers with episiotomy.

Nursing Education

- With the emerging health care demands and newer trends in field of nursing, education must focus on the innovations to enhance the nursing care.
- Nurses could learn the assessment of pain and wound healing, use of Lavender Oil Sitzbath on episiotomy pain and wound healing.
- Nursing students should be taught about the importance of Lavender Oil Sitzbath thereby they can help mothers in puerperium to overcome the discomforts during puerperium.

- Adequate practical training can be given to the nursing staff and students regarding Lavender Oil Sitzbath
- Techniques in reducing pain and discomforts during puerperium and it can be incorporated in nursing curriculum.

Nursing Research

- The professionals and the students can conduct many studies in different complimentary therapies to bring about newer perspectives in nursing care.
- Nurse researcher should challenge to perform scientific work and take part in assessment, applications, evaluation of complementary therapies in mothers with episiotomy.
- The study finding will motivate the initial researchers to conduct the same study on large scale and study will be the reference for the extensive and intensive nursing care. Disseminate the findings of research through conferences, seminars and publishing in nursing journals.

Recommendation

- A similar study can be conducted with increased frequency of administration of Lavender Oil Sitzbath which may yield more reliable result.
- A similar study can be conducted by selecting a larger sample on a long-term basis
- The study can be conducted in different settings with similar facilities
- A comparative study can be conducted with hot and cold therapy
- A comparative study can be conducted between Lavender Oil Sitzbath and other pharmacological measures.
- A comparative study can be conducted between Lavender Oil Sitzbath and other non-pharmacological measures.
- A comparative study can be conducted on the effectiveness of Lavender Oil Sitzbath between urban and rural area.
- A comparative study can be conducted between primiparous women and multiparous women to assess the effectiveness of Lavender Oil Sitzbath.